

=> FILE REG

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STRUCTURE FILE UPDATES: 23 OCT 2002 HIGHEST RN 464874-85-9
DICTIONARY FILE UPDATES: 23 OCT 2002 HIGHEST RN 464874-85-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
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in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 10:10:46 ON 25 OCT 2002
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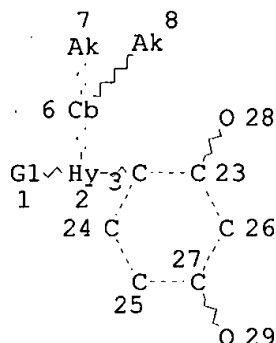
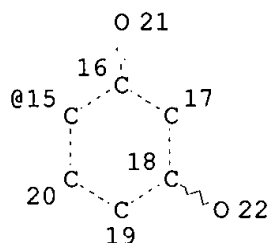
FILE COVERS 1907 - 25 Oct 2002 VOL 137 ISS 17
FILE LAST UPDATED: 23 Oct 2002 (20021023/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE L17

L5	SCR 1840
L7	SCR 1993
L9	STR



Ak~Cb~Ak
12 @13 14

*426 structures from
the query
Covers structure 1-41*

VAR G1=15/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY UNS AT 2

GGCAT IS MCY UNS AT 13

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2 N AT 2

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L12 426 SEA FILE=REGISTRY SSS FUL L9 AND L5 AND L7

L13 210 SEA FILE=HCAPLUS ABB=ON L12

L14 66 SEA FILE=HCAPLUS ABB=ON L13(L) (PREP OR SPN OR IMF)/RL

L15 9 SEA FILE=HCAPLUS ABB=ON L14 AND ?YELLOW?

L16 42 SEA FILE=HCAPLUS ABB=ON L14 AND (LIGHT? OR UV OR ULTRAVIOLET
OR ULTRA(W)VIOLET) (3A) ABSORB?

L17 43 SEA FILE=HCAPLUS ABB=ON L15 OR L16

43 CA references with utility

=> SEL HIT RN L17 1-43

E1 THROUGH E185 ASSIGNED 185 hit structures from the 43 CA ref's so
printed only 1 structure per reference

=> D L17 ALL 1-43 FHITSTR

L17 ANSWER 1 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:353442 HCAPLUS

DN 136:370503

TI Non-yellowing ortho-dialkyl aryl-substituted triazine
ultraviolet light absorbers and their
preparation

IN Gupta, Ram B.; Singh, Hargurpreet; Cappadona, Russell C.; Paterna, Mark;

applicants

Wagner, Al
 PA Cytec Technology Corp., USA
 SO PCT Int. Appl., 137 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07D251-24
 ICS C08K005-3492
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 28
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002036579	A1	20020510	WO 2001-US32209	20011016
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002011759	A5	20020515	AU 2002-11759	20011016
PRAI	US 2000-698368	A	20001030		
	WO 2001-US32209	W	20011016		
OS	MARPAT 136:370503				
AB	Pyrimidine and triazine UV light absorbers contg. a phenolic arom. groups(s) and a nonphenolic arom. groups(s) protect materials (plastics, cosmetics, fibers, etc.) against degrdn. by environmental forces, inclusive of UV light, actinic radiation, oxidn., moisture, atm. pollutants, and combinations. The new class of pyrimidines and triazines includes 2(1) nonphenolic arom. groups with hydrocarbyl groups that are ortho to each other and 1(2) resorcinol or substituted resorcinol groups attached to a triazine or pyrimidine ring. The pyrimidines and triazines may be included in a polymeric structure. Lexan 100 contg. 0.35% 2-[2-hydroxy-4-octyloxyphenyl]-4,6-(3,4-dimethylphenyl)- 1,3,5-triazine and 0.1% phosphite antioxidant (Ultranox 641) had a melt flow index 6.8 g/10 min, vs. 8 g/10 min for a control polycarbonate sample without stabilizer, after oven aging at 130.degree..				
ST	pyrimidine dialkylaryl resorcinol light stabilizer polymer; triazine dialkylaryl resorcinol light stabilizer polymer				
IT	Discoloration prevention agents (antiyellowing ; non- yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)				
IT	UV stabilizers (non- yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)				
IT	Cosmetics Dyes Paper Photographic films (non- yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)				
IT	Alkyd resins Aminoplasts Epoxy resins, uses				

Natural rubber, uses
 Phenolic resins, uses
 Polyamides, uses
 Polycarbonates, uses
 Polyesters, uses
 Polyethers, uses
 Polyimides, uses
 Polyketones
 Polyolefins
 Polyoxymethylenes, uses
 Polyoxyphenylenes
 Polysiloxanes, uses
 Polysulfones, uses
 Polythiophenylenes
 Polyurethanes, uses
 Synthetic rubber, uses

RL: POF (Polymer in formulation); USES (Uses)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers and other materials)

IT Polyimides, uses

RL: POF (Polymer in formulation); USES (Uses)
 (polyamide-; non-yellowing ortho-dialkyl aryl-substituted
 triazine UV light absorbers for
 incorporating into polymers and other materials)

IT Polyimides, uses

Polysulfones, uses
 RL: POF (Polymer in formulation); USES (Uses)
 (polyether-; non-yellowing ortho-dialkyl aryl-substituted
 triazine UV light absorbers for
 incorporating into polymers and other materials)

IT Polyamides, uses

Polyethers, uses
 RL: POF (Polymer in formulation); USES (Uses)
 (polyimide-; non-yellowing ortho-dialkyl aryl-substituted
 triazine UV light absorbers for
 incorporating into polymers and other materials)

IT Polyethers, uses

RL: POF (Polymer in formulation); USES (Uses)
 (polysulfone-; non-yellowing ortho-dialkyl aryl-substituted
 triazine UV light absorbers for
 incorporating into polymers and other materials)

IT 423177-98-4P 423177-99-5P 423178-00-1P

423178-01-2P 423178-02-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers)

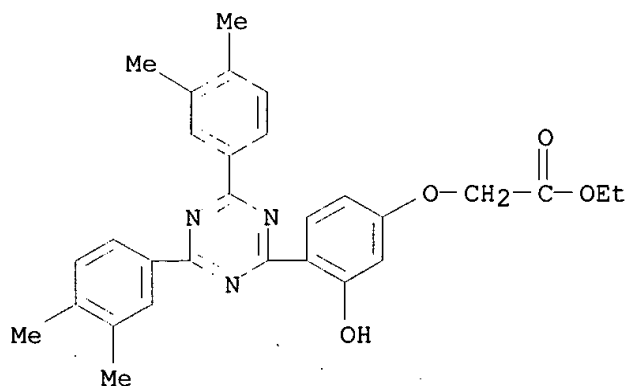
IT 423177-96-2P

RL: IMF (Industrial manufacture); MOA (Modifier or additive
 use); PREP (Preparation); USES (Uses)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers)

IT 260981-92-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers)

IT 95-47-6, o-Xylene, reactions 98-09-9, Benzenesulfonyl chloride
 98-88-4, Benzoyl chloride 105-39-5, Ethyl chloroacetate 108-46-3,
 Resorcinol, reactions 108-77-0, Cyanuric chloride 23500-79-0
 25267-27-0, Iodobutane 25267-31-6, Iodooctane 423177-97-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers)
 IT 9002-86-2, Polyvinylchloride 9003-08-1, Melamine/formaldehyde resin
 9003-17-2, Polybutadiene 9003-35-4, Phenol/formaldehyde copolymer
 9003-53-6, Polystyrene 9003-54-7, Styrene acrylonitrile copolymer
 9003-56-9, ABS 9004-36-8, Cellulose acetate butyrate 9011-05-6,
 Urea/formaldehyde copolymer 24936-68-3, Lexan 100, uses 25014-41-9,
 Polyacrylonitrile 25037-45-0
 RL: POF (Polymer in formulation); USES (Uses)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers and other materials)
 RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Cytec Tech Corp; WO 0014077 A 2000 HCAPLUS
 IT 423177-98-4P
 RL: IMF (Industrial manufacture); PREP (Preparation);
 PREP (Preparation)
 (non-yellowing ortho-dialkyl aryl-substituted triazine
 UV light absorbers for incorporating into
 polymers)
 RN 423177-98-4 HCAPLUS
 CN Acetic acid, [4-[4,6-bis(3,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-
 hydroxyphenoxy]-, ethyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 2001:752426 HCAPLUS
 DN 136:151935
 TI Influence of polymer matrixes on the photophysical properties of
 UV absorbers
 AU Stein, Martin; Keck, Juergen; Waiblinger, Frank; Fluegge, Anja P.; Kramer,
 Horst E. A.; Hartschuh, Achim; Port, Helmut; Leppard, David; Rytz, Gerhard
 CS Institut fuer Physikalische Chemie, Universitaet Stuttgart, Stuttgart,
 D-70569, Germany
 SO Journal of Physical Chemistry A (2002), 106(10), 2055-2066
 CODEN: JPCAFH; ISSN: 1089-5639

- PB American Chemical Society
 DT Journal
 LA English
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 35, 42, 73
- AB The copolymn. parameters for monomer pairs of the copolymerizable
UV absorbers MA-TIN 1 (2-[2-hydroxy-3-tert-butyl-5-(O-[2-hydroxy-3-(2-methylpropenoyloxy)propyl]-2-carbonyloxyethyl)phenyl]benzotriazole) and MA-TZ 1 (2,4-bis(2,4-dimethylphenyl)-6-[2-hydroxy-4-(2-hydroxy-3-[2-methylpropenoyloxy])propoxyphenyl]-1,3,5-triazine) with styrene and Me methacrylate were detd. The **UV absorbers** were present to a higher extent in the copolymers than they are when simply present as mixts. of monomeric **UV absorbers** in the monomer feed. At higher temps., the radiationless deactivation from the excited proton-transferred singlet state becomes more efficient for the **UV absorbers** phys. mixed in the polymer than for the resp. polymeric **UV absorbers**. MA-TZ 1 embedded in poly(Me methacrylate) shows an equal increase of phosphorescence intensity with UV irradiation time as the decrease of the proton-transferred fluorescence. By combining fluorescence and phosphorescence measurements it becomes possible to est. the proportion of UV stabilizer mols. with an intermol. hydrogen bridge to poly(Me methacrylate) and which are not suitable for light protection of polymers at room temp. At low pressure and temp., the increase of light-induced phosphorescence was delayed. This "phosphorescence induction" phenomenon can be ascribed to the free vol. of polymer matrixes in which various **UV absorbers** have been incorporated. The emission spectroscopic results are applicable to products which are customary in trade, as shown by investigations on a clear coat binder system.
- ST benzotriazole **UV absorber** PMMA incorporation
 phosphorescence fluorescence; triazine polymerizable **UV absorber** reactivity ratio
- IT UV stabilizers
 (effect of polymer matrixes on photophys. properties of **UV absorbers**)
- IT Pressure
 (effect on phosphorescence of benzotriazole deriv.)
- IT Proton transfer
 (excited-state; in effect of polymer matrixes on photophys. properties of **UV absorbers**)
- IT Fluorescence
 Free volume
 Hydrogen bond
 Phosphorescence
 (in effect of polymer matrixes on photophys. properties of **UV absorbers**)
- IT Activation energy
 (of radiationless deactivation in copolymers of polymerizable **UV absorbers**)
- IT Reactivity ratio in polymerization
 (radical; in polymn. of **UV absorber** acrylic esters)
- IT 136902-10-8 381164-50-7
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
 (**UV-absorbing** monomer; reactivity ratio in radical polymn. with Me methacrylate and styrene)
- IT 9003-53-6, Polystyrene 9011-14-7, PMMA
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (effect of polymer matrixes on photophys. properties of **UV absorbers**)
- IT 179693-99-3P 179694-03-2P 381164-51-8P 381164-52-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(effect of polymer matrixes on photophys. properties of UV
absorbers)

IT 163350-84-3

RL: PRP (Properties)
(model compd.; effect of polymer matrixes on photophys. properties of
UV absorbers)

IT 80-62-6, Methyl methacrylate 100-42-5, Styrene, properties

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(reactivity ratio in radical polymn. with UV
absorbers)

RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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Systems 1990, P654 HCAPLUS
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IT 179693-99-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)

(effect of polymer matrixes on photophys. properties of UV
absorbers)

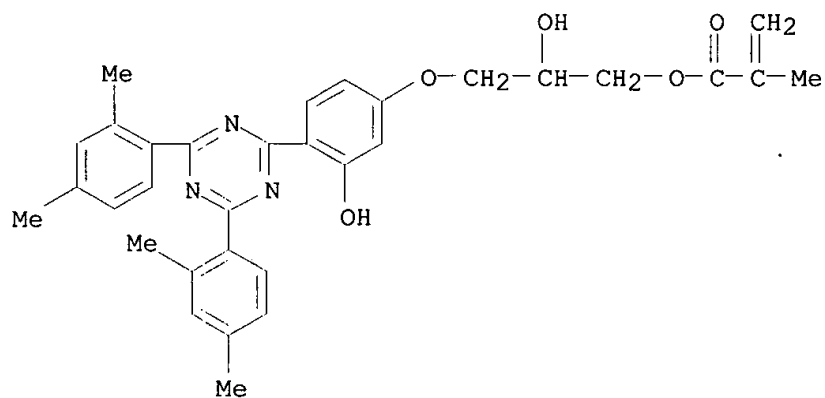
RN 179693-99-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-
triazin-2-yl]-3-hydroxyphenoxy]-2-hydroxypropyl ester, polymer with
ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 136902-10-8

CMF C32 H33 N3 O5



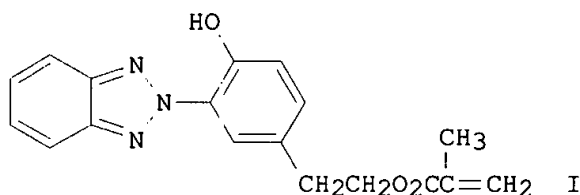
CM 2

CRN 100-42-5
CMF C8 H8

H₂C=CH-Ph

L17 ANSWER 3 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:661527 HCAPLUS
DN 135:228291
TI Manufacture of curable acrylic coatings containing copolymerized UV stabilizers
IN Sapper, Ekkehard; Baumgart, Hubert
PA Basf Coatings A.-G., Germany
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C09D157-12
ICS B05D007-00
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001064803	A1	20010907	WO 2001-EP2285	20010301
	W: BR, JP, US				
	RW: DE, ES, FR, IT				
	DE 10010416	A1	20010913	DE 2000-10010416	20000303
PRAI	DE 2000-10010416	A	20000303		
GI					



- AB Phys.- or thermally- and/or radiation-curable compns. for clear or pigmented coatings with good chem. and weathering resistance comprise .gtoreq.1 (meth)acrylate copolymer contg. .gtoreq.1 polymerizable UV stabilizer built-in as a comonomer into acrylic polymer. For example, a heat-cured solvent-based clear lacquer comprised a mixt. of a tris(alkoxycarbonylamino)triazine crosslinker (alkyl group unspecified) with acrylic acid-Bu methacrylate-2-ethylhexyl methacrylate-2-hydroxyethyl acrylate-2-hydroxypropyl methacrylate-styrene copolymer with benzotriazolyl deriv. I.
- ST acrylic curable coating polymerizable **UV absorber** benzotriazolyl deriv; UV stabilizer polymerizable benzotriazolyl deriv acrylic coating; benzotriazolyl hydroxyphenylethyl methacrylate polymerizable UV stabilizer acrylic coating
- IT Coating materials
(UV-resistant; curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)
- IT Coating materials
(chem. resistant; curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)
- IT UV stabilizers
(polymerizable; curable acrylic coatings with good chem. and weathering resistance contg. copolymd.)
- IT Polymer degradation
(weathering; curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)
- IT 183592-47-4D, tris(alkyl esters)
RL: NUU (Other use, unclassified); USES (Uses)
(crosslinking agents; curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)
- IT 358974-47-7P 358974-48-8P 358974-49-9P 358974-50-2P
358974-51-3P
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; PATENT ABSTRACTS OF JAPAN 1990, V014(290), PC-0731
- (2) Kansai Paint Co Ltd; EP 0806463 A 1997 HCAPLUS
- (3) Minnesota Mining & Mfg; WO 9825763 A 1998 HCAPLUS
- (4) Mitsubishi Rayon Co Ltd; JP 02091170 A 1990 HCAPLUS
- (5) Monsanto Co; WO 9400524 A 1994 HCAPLUS
- (6) Nippon Catalytic Chem Ind; EP 0337744 A 1989 HCAPLUS
- (7) Nippon Catalytic Chem Ind; WO 0020523 A 2000 HCAPLUS
- (8) Nippon Catalytic Chem Ind; EP 1036834 A 2000 HCAPLUS
- (9) Otsuka Chemical Co Ltd; WO 0021937 A 2000 HCAPLUS
- (10) Otsuka Chemical Co Ltd; EP 1055669 A 2000 HCAPLUS
- (11) Toray Industries; EP 0580857 A 1994 HCAPLUS

IT **358974-51-3P**

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(curable acrylic coatings with good chem. and weathering resistance contg. copolymd. UV stabilizers)

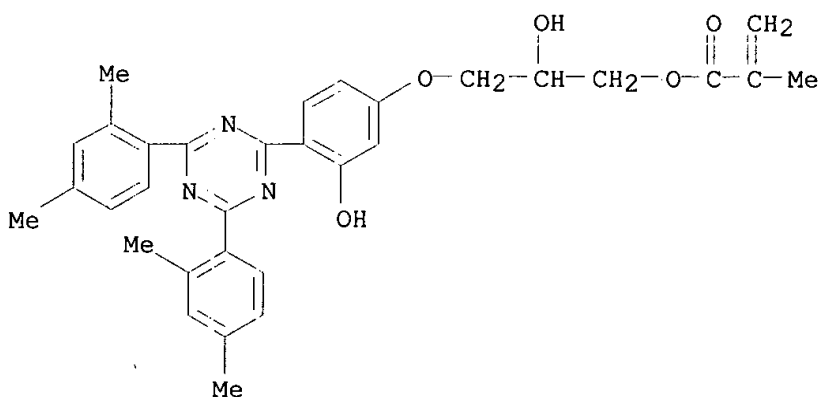
RN 358974-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-2-hydroxypropyl ester, polymer with butyl 2-methyl-2-propenoate, cyclohexyl 2-methyl-2-propenoate, ethenylbenzene, 4-hydroxybutyl 2-propenoate, 2-hydroxyethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 136902-10-8

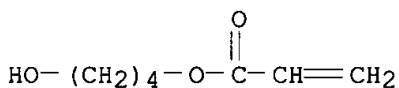
CMF C32 H33 N3 O5



CM 2

CRN 2478-10-6

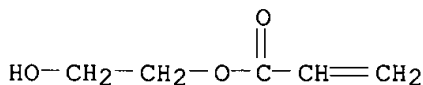
CMF C7 H12 O3



CM 3

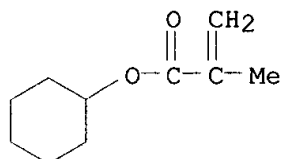
CRN 818-61-1

CMF C5 H8 O3



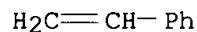
CM 4

CRN 101-43-9
CMF C10 H16 O2



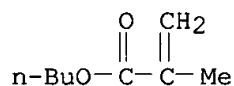
CM 5

CRN 100-42-5
CMF C8 H8



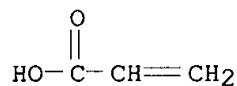
CM 6

CRN 97-88-1
CMF C8 H14 O2



CM 7

CRN 79-10-7
CMF C3 H4 O2



L17 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:28622 HCAPLUS
DN 134:86667
TI Polymer-bonded functional agents
IN Nakamura, Michiei; Yanagimoto, Hiromitsu; Shimanaka, Hiroyuki; Yamashita, Rokuya
PA Dainichiseika Color and Chemicals Mfg. Co. Ltd., Japan
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C08F008-00
ICS C08G085-00; A61K007-42

CC 35-8 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1067144	A1	20010110	EP 2000-114323	20000704
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001019711	A2	20010123	JP 1999-193039	19990707
	CN 1280151	A	20010117	CN 2000-120430	20000707
PRAI	JP 1999-193039	A	19990707		
AB	Polymer-bonded functional agents are each obtained by reacting a functional agent contg. reactive groups with a polymer contg. groups reactive with the reactive groups of the functional agent. The functional agent comprises at least one functional agent selected from the group consisting of antioxidants, UV absorbers , light stabilizers , IR absorbers and antistatic agents. Use of these polymer-bonded functional agents can provide articles with improved functions.				
ST	functional agent polymer additive				
IT	Optical materials (IR absorbers; polymer-bonded functional agents)				
IT	IR materials (absorbers; polymer-bonded functional agents)				
IT	Aminoplasts Epoxy resins, preparation Polyamides, preparation Polyesters, preparation Polyethers, preparation Polyolefins Polysiloxanes, preparation Polyureas Polyurethanes, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (functional agent-contg.; polymer-bonded functional agents)				
IT	Antioxidants Antistatic agents Cosmetics Light stabilizers UV stabilizers (polymer-bonded functional agents)				
IT	Acrylic polymers, uses Linear low density polyethylenes RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (polymer-bonded functional agents)				
IT	9003-08-1P, Melamine resin RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (functional agent-contg.; polymer-bonded functional agents)				
IT	100-37-8DP, Diethylamino-ethanol, reaction products with polymers 1421-49-4DP, 3,5-Di-tert-butyl-4-hydroxybenzoic acid, reaction products with polymers 2403-88-5DP, 4-Hydroxy-2,2,6,6-tetramethylpiperidine, reaction products with polymers 2403-89-6DP, 4-Hydroxy-1,2,2,6,6-pentamethylpiperidine, reaction products with polymers 9010-77-9DP, Eth-ylene-acrylic acid copolymer, reaction products with functional agents 14234-65-2DP, 3-[3'-(2''H-Benzotriazol-2''-yl)-4'-hydroxyphenyl]propionic acid, reaction products with polymers 20170-32-5DP, 3-(3',5'-Di-tert-butyl-4'-hydroxyphenyl)propionic acid, reaction products with polymers 24794-55-6DP, 3-(3'-tert-Butyl-5'-methyl-4'-hydroxyphenyl)propionic acid,				

reaction products with polymers 25067-34-9DP, Ethylene-vinyl alcohol copolymer, reaction products with functional agents 85255-59-0P, Ethylene-acrylic acid copolymer ester with 4-hydroxy-1,2,2,6,6-pentamethylpiperidine 131807-04-0DP, 1-Octyloxy-4-hydroxy-2,2,6,6-tetramethylpiperidine, reaction products with polymers 316829-12-6DP, reaction products with polymers 317802-85-0P, Ethylene-vinyl alcohol copolymer ester with 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionic acid 317802-86-1DP, Ethylene-vinyl alcohol copolymer ester with 3-(3'-tert-butyl-5'-methyl-4'-hydroxyphenyl)propionic acid, reaction products with functional agents 317802-87-2DP, Ethylene-vinyl alcohol copolymer ester with 3,5-di-5-Butyl-4-hydroxybenzoic acid, reaction products with functional agents 317802-88-3P, Ethylene-vinyl alcohol copolymer ester with 3-[3'-(2''H-benzotriazol-2''-yl)-4'-hydroxyphenyl)]propionic acid 317802-90-7P, Ethylene-vinyl alcohol copolymer ester with 2-[4''-[(2'''-chlorocarbonyl-propionyloxy)-3'''-dodecyloxypropoxy]-2'''-hydroxyphenyl]-4,6-bis(2',4'-dimethylphenyl)-1,3,5-triazine and 3-[3'-(2''H-benzotriazol-2''-yl)-4'-hydroxyphenyl)]propionic acid 317802-91-8P, Ethylene-acrylic acid copolymer ester with 4-Hydroxy-2,2,6,6-tetramethylpiperidine 317802-92-9P, Ethylene-acrylic acid copolymer ester with 1-Octyloxy-4-hydroxy-2,2,6,6-tetramethylpiperidine 317802-93-0P, Ethylene-acrylic acid copolymer ester with diethylaminoethanol

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer-bonded functional agents)

IT 74-85-1D, Ethene, polymers with .alpha.-olefins, polymers with .alpha.-olefins 9002-88-4, Polyethylene
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polymer-bonded functional agents)

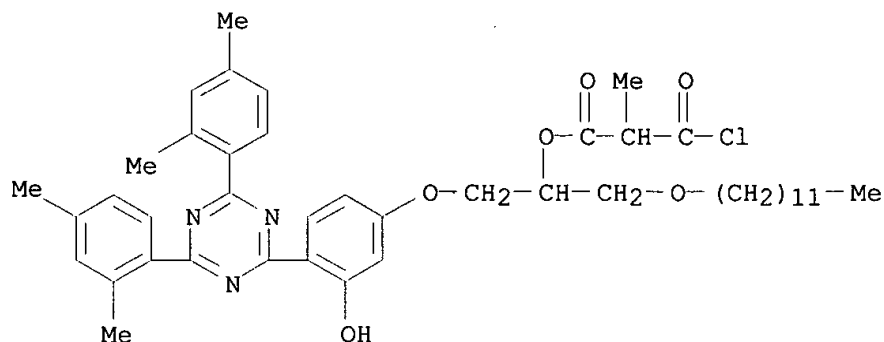
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Allergan Inc; WO 9409042 A 1994 HCAPLUS
- (2) Basf Ag; FR 2012439 A 1970 HCAPLUS
- (3) Basf Ag; EP 0826362 A 1998 HCAPLUS
- (4) Basf Ag; EP 0896006 A 1999 HCAPLUS
- (5) Blatz, P; US 3457328 A 1969
- (6) Ciba Apecialty Chemicals Holding Inc; WO 9818830 A 1998 HCAPLUS
- (7) Ciba-Geigy Ag; FR 2644790 A 1990 HCAPLUS
- (8) Diveley, W; US 4520171 A 1985 HCAPLUS
- (9) Eastman Kodak Company; EP 0641805 A 1995 HCAPLUS
- (10) Keller, H; US 5869099 A 1999 HCAPLUS
- (11) Minnesota Mining And Manufacturing Company; WO 9849207 A 1998 HCAPLUS
- (12) Mitsui Petrochemical Industries Ltd; FR 2093447 A 1972 HCAPLUS
- (13) Pennwalt Corporation; EP 0303281 A 1989 HCAPLUS
- (14) Pennwalt Corporation; EP 0303986 A 1989 HCAPLUS
- (15) Pennwalt Corporation; EP 0303988 A 1989 HCAPLUS
- (16) Pennwalt Corporation; EP 0306729 A 1989 HCAPLUS
- (17) Sovak, M; US 5487885 A 1996 HCAPLUS

IT 316829-12-6DP, reaction products with polymers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer-bonded functional agents)

RN 316829-12-6 HCAPLUS

CN Propanoic acid, 3-chloro-2-methyl-3-oxo-, 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-1-[(dodecyloxy)methyl]ethyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 5 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 2000:175844 HCAPLUS
 DN 132:223867
 TI Light-stable chromophore system
 IN Eldin, Sameer
 PA Ciba Specialty Chemicals Holding Inc., Switz.
 SO PCT Int. Appl., 70 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C08F008-30
 ICS G03C001-815
 CC 42-2 (Coatings, Inks, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000014126	A1	20000316	WO 1999-EP6323	19990827
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9958560	A1	20000327	AU 1999-58560	19990827
PRAI	CH 1998-1845	A	19980909		
	WO 1999-EP6323	W	19990827		

AB The system contains the following in the order given: (a) a chromophore layer (i.e., a pigmented polymer layer or a layer of a polymer contg. copolymer dye residues), (b) a light protection agent layer, (c) an oxygen barrier layer, and (d) optionally a polymer which forms a protective layer of varnish (i.e., a clearcoat). Such systems provide improved lightfastness of, e.g., automobile finishes or photog. prints. The a and b layers may comprise poly(vinyl alc.) etherified or esterified with a colorant and with a light stabilizer, resp.

ST multilayer coating light resistance; automobile finish weather resistance; photog print fading resistance

IT Coating materials
 (protection of colored layers against light and air)

IT **260999-23-3P**, Adipic acid-2,4-bis(2,4-dihydroxyphenyl)-6-mesityl-1,3,5-triazine-Cymel 301-dimethylolpropionic acid-glycidyl methacrylate-12-hydroxystearic acid-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-trimethylolpropane copolymer

- 261162-18-9P, Laromer EA 81-Laromer PE 55F-2,4,6-tris[2-hydroxy-4-(3-butoxy-2-hydroxypropoxy)phenyl]-s-triazine acrylate copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (UV absorber layer; protection of colored layers against light and air)
- IT 220254-30-8P, 2,5-Bis(6-acryloyloxyhexyl)-2,5-dihydro-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione-Laromer EA 81 copolymer
 260999-24-4P, Adipic acid-2,5-dihydro-2,5-bis(6-hydroxyhexyl)-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione-dimethylolpropionic acid-formaldehyde-glycidyl methacrylate-12-hydroxystearic acid-isophthalic acid-melamine-methacrylic acid-methyl methacrylate-neopentyl glycol-trimethylolpropane copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (colored layer; protection of colored layers against light and air)
- IT 261162-15-6P, Mowiol 4-98 [2-(methacryloyloxy)ethyl]carbamate
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oxygen barrier layer; protection of colored layers against light and air)
- IT 260999-21-1P, Adipic acid-2,4-bis(2,4-dihydroxyphenyl)-6-mesityl-1,3,5-triazine-dimethylolpropionic acid-glycidyl methacrylate-12-hydroxystearic acid-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-trimethylolpropane copolymer 260999-22-2P, Adipic acid-2,5-dihydro-2,5-bis(6-hydroxyhexyl)-3,6-diphenylpyrrolo[3,4-c]pyrrole-1,4-dione-dimethylolpropionic acid-glycidyl methacrylate-12-hydroxystearic acid-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-trimethylolpropane copolymer
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (protection of colored layers against light and air)
- IT 148236-55-9P, 2,4,6-Tris[2-hydroxy-4-(3-butoxy-2-hydroxypropoxy)phenyl]-s-triazine
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (protection of colored layers against light and air)
- IT 814-68-6, Acryloyl chloride 2125-23-7, 2,4,6-Tris(2,4-dihydroxyphenyl)-s-triazine 2426-08-6, Butyl glycidyl ether 5292-43-3, tert-Butyl bromoacetate 194029-69-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (protection of colored layers against light and air)
- IT 260999-26-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (protection of colored layers against light and air)
- IT 260999-25-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (protection of colored layers against light and air)
- IT 7429-90-5, Aluminum, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (substrate; protection of colored layers against light and air)
- RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Agfa-Gevaert Ag; EP 0010225 A 1980 HCAPLUS
 (2) Autotype International Ltd; EP 0249306 A 1987 HCAPLUS
 (3) Winter, R; US 5554760 A 1996 HCAPLUS
- IT 260999-23-3P, Adipic acid-2,4-bis(2,4-dihydroxyphenyl)-6-mesityl-1,3,5-triazine-Cymel 301-dimethylolpropionic acid-glycidyl methacrylate-12-hydroxystearic acid-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-trimethylolpropane copolymer

RL: IMF (Industrial manufacture); PREP (Preparation);

PREP (Preparation); USES (Uses)

(UV absorber layer; protection of colored layers
against light and air)

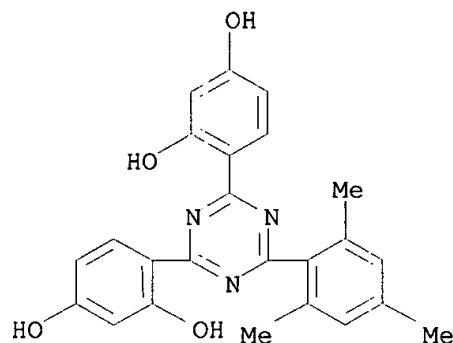
RN 260999-23-3 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2,2-dimethyl-1,3-propanediol,
2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid,
3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 12-hydroxyoctadecanoic
acid, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid,
oxiranylmethyl 2-methyl-2-propenoate, 1,3,5-triazine-2,4,6-triamine and
4,4'-[6-(2,4,6-trimethylphenyl)-1,3,5-triazine-2,4-diyl]bis[1,3-
benzenediol] (9CI) (CA INDEX NAME)

CM 1

CRN 176225-63-1

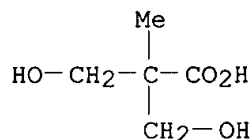
CMF C24 H21 N3 O4



CM 2

CRN 4767-03-7

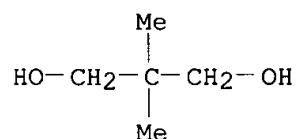
CMF C5 H10 O4



CM 3

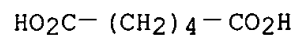
CRN 126-30-7

CMF C5 H12 O2



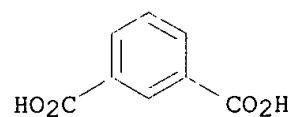
CM 4

CRN 124-04-9
CMF C6 H10 O4



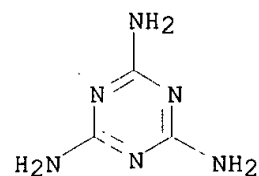
CM 5

CRN 121-91-5
CMF C8 H6 O4



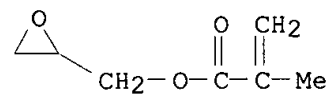
CM 6

CRN 108-78-1
CMF C3 H6 N6



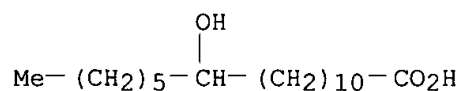
CM 7

CRN 106-91-2
CMF C7 H10 O3



CM 8

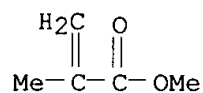
CRN 106-14-9
CMF C18 H36 O3



CM 9

CRN 80-62-6

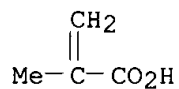
CMF C5 H8 O2



CM 10

CRN 79-41-4

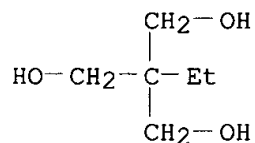
CMF C4 H6 O2



CM 11

CRN 77-99-6

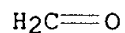
CMF C6 H14 O3



CM 12

CRN 50-00-0

CMF C H2 O



L17 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:175799 HCAPLUS

DN 132:208726

TI Process for making 2-hydroxy-4-alkoxyphenyl- or 2,4-dihydroxyphenyl-substituted 1,3,5-triazine **UV absorbers**

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

IN Gupta, Ram B.; Jakiela, Dennis J.; Venimadhavan, Sampath; Cappadona,
Russell C.; Pai, Venkatrao K.
PA Cytec Technology Corp., USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D251-24
ICS C07D251-22; C07D251-20
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000014074	A1	20000316	WO 1999-US19657	19990901
	W:	AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9957892	A1	20000327	AU 1999-57892	19990901
	BR 9914480	A	20010626	BR 1999-14480	19990901
	EP 1109793	A1	20010627	EP 1999-945255	19990901
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRAI	US 1998-99220P	P	19980904		
	WO 1999-US19657	W	19990901		
OS	MARPAT 132:208726				
AB	Mixts. contg. .gtoreq.1 of the title triazine derivs., useful for UV absorbers for polymers, are manufd. by reaction cyanuric halide with benzene derivs. having .gtoreq.1 H atom and 2 groups selected from OH, ether, or acyloxy and then with benzene derivs. having groups not contg. O atoms attached to the benzene ring. Optionally, the product from the 1st step is isolated before the 2nd step. Thus, stirring a mixt. contg. 1.84 g cyanuric chloride and 0.55 g resorcinol in 25 mL PhCl 2 h at room temp. and 3 h at 30.degree. in the presence of AlCl3, stirring a mixt. contg. 256 mg isolated 2-(2,4-dihydroxyphenyl)-4,6-dichloro-1,3,5-triazine intermediate, 5 mL m-xylene, and 200 mg AlCl3 7.5 h, adding 5 mL m-xylene, and stirring an addnl. 9 h gave 2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine.				
ST	hydroxyalkoxyphenyltriazine UV absorber manuf; dihydroxyphenyltriazine UV absorber manuf				
IT	UV stabilizers (manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine UV absorbers)				
IT	1853-82-3P, 2,4-Bis(2,4-dihydroxyphenyl)-6-chloro-1,3,5-triazine RL: IMF (Industrial manufacture); PREP (Preparation) (byproduct; manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine UV absorbers)				
IT	150238-76-9P, 4,6-Dichloro-2-(2,4-dihydroxyphenyl)-1,3,5-triazine 260781-84-8P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (intermediate; manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine UV absorbers)				
IT	1668-53-7P 1820-28-6P 2725-22-6P 13681-75-9P 25023-99-8P				

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine **UV absorbers**)

IT 108-38-3, reactions 108-46-3, 1,3-Benzenediol, reactions 108-77-0, Cyanuric chloride 150-19-6, 3-Methoxyphenol 34380-89-7, Resorcinol monoethyl ether 50739-54-3, 1,3-Dioctyloxybenzene

RL: RCT (Reactant); RACT (Reactant or reagent)
(manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine **UV absorbers**)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

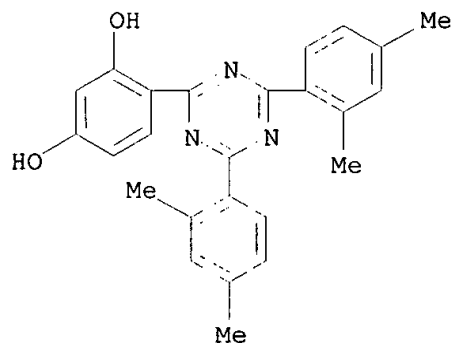
- (1) Asahi Denka Kogyo Kk; JP 09059263 A 1997 HCAPLUS
- (2) Brunetti, H; HELVETICA CHIMICA ACTA 1972, V55(5), P1566 HCAPLUS
- (3) Ciba; DE 1169947 B 1964
- (4) Ciba Geigy; EP 0779280 A 1997 HCAPLUS
- (5) Duennenberger; US 3244708 A 1966
- (6) Duennenberger; US 3270016 A 1966
- (7) Horikoshi, Y; NIPPON KAGAKU KAISHI 1974, 3, P530 HCAPLUS
- (8) Modi, B; J INST CHEM (INDIA) 1993, V65(5), P174 HCAPLUS
- (9) Nissan Chemical Industries Ltd; JP 60260502 A 1985 HCAPLUS

IT 1668-53-7P

RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(manuf. of hydroxyalkoxyphenyl- or dihydroxyphenyl-substituted triazine **UV absorbers**)

RN 1668-53-7 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI)
(CA INDEX NAME)



L17 ANSWER 7 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:819374 HCAPLUS

DN 132:65418

TI Aminoplast-anchored triaryl-triazine **UV absorber**

IN Jakiela, Dennis J.; Gupta, Ram B.; Sassi, Thomas P.; Haacke, Gottfried

PA Cytec Technology Corp., USA

SO PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D487-04

ICS C08K005-34; C08K005-3492

CC 42-5 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9967246	A1	19991229	WO 1998-US24879	19981120
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 9810599	A	19990730	ZA 1998-10599	19981119
	AU 9915961	A1	20000110	AU 1999-15961	19981120
	BR 9815916	A	20010220	BR 1998-15916	19981120
	EP 1090002	A1	20010411	EP 1998-960345	19981120
	R: BE, DE, ES, FR, GB, IT, NL, SE				
	JP 2002518556	T2	20020625	JP 2000-555899	19981120
PRAI	US 1998-90262P	P	19980622		
	WO 1998-US24879	W	19981120		
AB	A novel class of UV absorbers , ortho-hydroxyphenyl-substituted triazine compds. bonded to aminoplast resins is provided. Compared to unanchored stabilizers, the anchored stabilizers disclosed herein have increased compatibility with coating resins and have reduced volatility due to higher mol. wts. resulting from anchoring. The anchored stabilizers are manufd. by the reaction of triazines contg. active hydrogen with alkoxymethylated aminoplasts in the presence of a catalytic amt. of acid. The novel ortho-hydroxyphenyl substituted triazine compds. are bound to the aminoplast resins by carbon-oxygen, carbon-carbamoyl nitrogen or carbon-active methylene carbon linkages. The aminoplasts include alkoxymethylated derivs. of glycolurils, melamines, and urea-formaldehyde resins. A typical UV absorber was manufd. by reaction of 10 g 2,4-bis(2,4-dimethylphenyl)-6-[2-hydroxy-4-(2-hydroxyethoxy)phenyl]-1,3,5-triazine 11 h at 133-134.degree. with 8.64 g Cymel 300 in PhCl in the presence of p-toluenesulfonic acid.				
ST	aminoplast adduct triaryltriazine UV absorber coating; melamine resin adduct bisdimethylphenylhydroxyethoxyphenyltriazine UV absorber manuf				
IT	Coating materials UV stabilizers (aminoplast-anchored triaryltriazine UV absorbers for coatings)				
IT	Aminoplasts RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (reaction products with triaryltriazines; aminoplast-anchored triaryltriazine UV absorbers for coatings)				
IT	Aminoplasts RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (reaction products, with triaryltriazines; aminoplast-anchored triaryltriazine UV absorbers for coatings)				
IT	1440-08-ODP, reaction products with aminoplasts 9003-08-1DP, Cymel 300, reaction products with triaryltriazines 143695-85-6DP, reaction products with aminoplasts 225529-70-4DP, reaction products with aminoplasts 225529-74-8DP, reaction products with aminoplasts 225529-89-5DP, reaction products with aminoplasts 225782-08-1DP, reaction products with aminoplasts 253158-25-7DP, reaction products with aminoplasts 253158-26-8DP, reaction products with aminoplasts RL: IMF (Industrial manufacture); MOA (Modifier or additive				

use); TEM (Technical or engineered material use); **PREP**
(Preparation); USES (Uses)
 (aminoplast-anchored triaryltriazine **UV absorbers**
 for coatings)

IT 201341-52-8, Cymel 303-Joncryl 510 copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (aminoplast-anchored triaryltriazine **UV absorbers**
 for coatings)

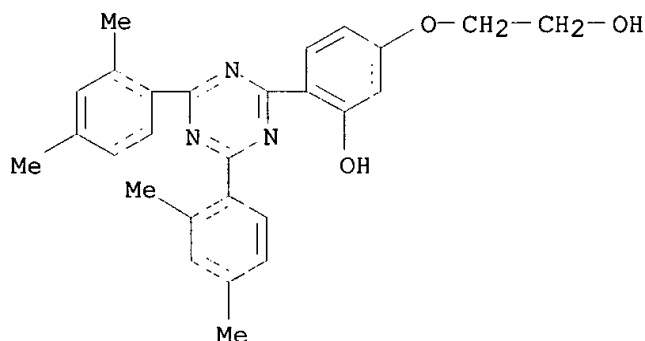
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) AGFA Gevaert AG; DE 19619946 A 1997 HCAPLUS
- (2) American Cyanamid Co; EP 0483488 A 1992 HCAPLUS
- (3) American Cyanamid Co; EP 0604980 A 1994 HCAPLUS
- (4) American Cyanamid Co; WO 9414864 A 1994 HCAPLUS
- (5) Ciba Geigy AG; DE 2113833 A 1971 HCAPLUS
- (6) Ciba Geigy AG; EP 0434608 A 1991 HCAPLUS
- (7) Ciba Geigy AG; EP 0530135 A 1993 HCAPLUS
- (8) Ciba Geigy AG; EP 0706083 A 1996 HCAPLUS
- (9) Ciba Geigy AG; EP 0711804 A 1996 HCAPLUS
- (10) Ciba Geigy AG; DE 19739797 A 1998 HCAPLUS
- (11) Stevenson, T; WO 9418278 A 1994 HCAPLUS
- (12) Toan, V; WO 9803489 A 1998 HCAPLUS

IT **1440-08-ODP**, reaction products with aminoplasts
 RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive
 use); TEM (Technical or engineered material use); **PREP**
(Preparation); USES (Uses)
 (aminoplast-anchored triaryltriazine **UV absorbers**
 for coatings)

RN 1440-08-0 HCAPLUS

CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(2-
 hydroxyethoxy)- (9CI) (CA INDEX NAME)



L17 ANSWER 8 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:819358 HCAPLUS
 DN 132:64951
 TI Poly-trisaryl-1,3,5-triazine carbamate **ultraviolet light**
absorbers
 IN Gupta, Ram B.; Jakiela, Dennis J.
 PA Cytec Technology Corp., USA
 SO PCT Int. Appl., 82 pp.
 CODEN: PIXXD2
 DT Patent
 LA English

IC ICM C07D251-24
ICS C08K005-3492; G03C001-73; A61K007-42
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 28, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9967227	A1	19991229	WO 1999-US13826	19990618
	W:	AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9946956	A1	20000110	AU 1999-46956	19990618
	BR 9911416	A	20010320	BR 1999-11416	19990618
	EP 1089986	A1	20010411	EP 1999-930409	19990618
	R:	BE, DE, ES, FR, GB, IT, NL, SE			
	US 6306939	B1	20011023	US 1999-335787	19990618
	JP 2002518489	T2	20020625	JP 2000-555881	19990618
PRAI	US 1998-90249P	P	19980622		
	WO 1999-US13826	W	19990618		
AB	The compds. are particularly useful, either alone or in combination with other additives, including other UV light absorbers and stabilizers, in stabilizing a polymeric film or molded article from degrdn. due to exposure to actinic radiation. The compds. are useful for thermoplastics (e.g., polycarbonate), and acrylic polyurethane coatings.				
ST	triazine carbamate actinic radiation stabilizer; thermoplastic UV absorber triazine carbamate; polycarbonate UV absorber triazine carbamate; clear coating acrylic polyurethane UV stabilizer				
IT	Polyurethanes, preparation RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, coatings; polytrisaryl triazine carbamates as UV light absorbers)				
IT	UV stabilizers (polytrisaryl triazine carbamates as UV light absorbers)				
IT	Polyketones RL: POF (Polymer in formulation); USES (Uses) (polytrisaryl triazine carbamates as UV light absorbers)				
IT	Polycarbonates, properties RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (polytrisaryl triazine carbamates as UV light absorbers)				
IT	Plastics, uses RL: POF (Polymer in formulation); USES (Uses) (thermoplastics; polytrisaryl triazine carbamates as UV light absorbers)				
IT	Coating materials (transparent; polytrisaryl triazine carbamates as UV light absorbers)				
IT	Coating materials (weather-resistant; polytrisaryl triazine carbamates as UV light absorbers)				

IT 225529-96-4P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coatings; polytrisaryl triazine carbamates as **UV light absorbers**)

IT 253141-69-4P 253141-71-8P 253141-73-0P
 253141-75-2P 253141-76-3P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (polytrisaryl triazine carbamates as **UV light absorbers**)

IT 24936-68-3, Lexan 105, properties 25037-45-0, Bisphenol A-carbonic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polytrisaryl triazine carbamates as **UV light absorbers**)

IT 1440-08-0 2778-42-9 130203-60-0 143695-85-6 225782-04-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polytrisaryl triazine carbamates as **UV light absorbers**)

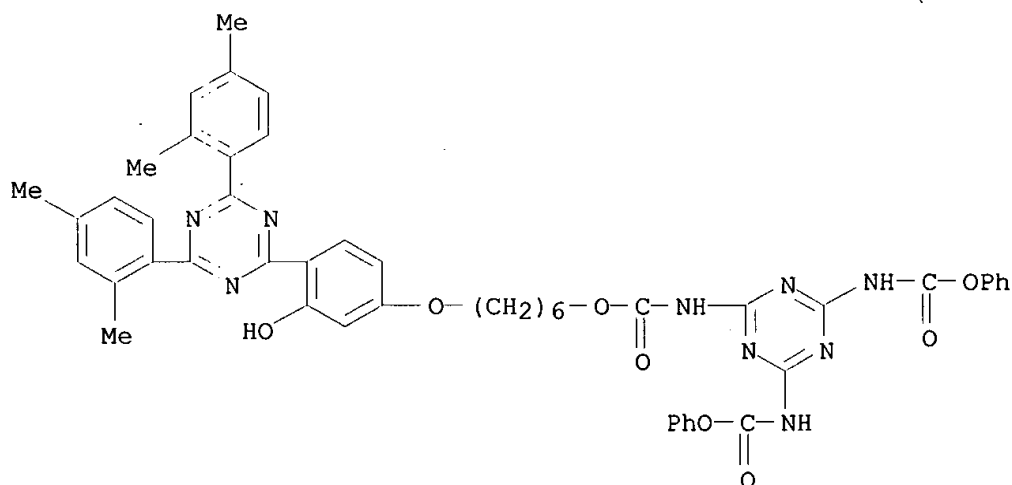
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Ciba Geigy AG; EP 0434619 A 1991 HCAPLUS
 (2) Ciba Geigy AG; EP 0693483 A 1996 HCAPLUS
 (3) Toan, V; WO 9803489 A 1998 HCAPLUS

IT 253141-69-4P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (polytrisaryl triazine carbamates as **UV light absorbers**)

RN 253141-69-4 HCAPLUS

CN Carbamic acid, [6-[[[6-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]hexyl]oxy]carbonyl]amino]-1,3,5-triazine-2,4-diyl]bis-, diphenyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 9 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:819355 HCAPLUS
 DN 132:64949
 TI Red-shifted trisaryl-1,3,5-triazine ultraviolet light

absorbers

IN Gupta, Ram B.; Jakiela, Dennis J.
 PA Cytec Technology Corp., USA
 SO PCT Int. Appl., 124 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07D251-24
 ICS C08K005-3492; G03C001-73; A61K007-42
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9967224	A1	19991229	WO 1999-US13707	19990617
	W:	AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	CA 2336246	AA	19991229	CA 1999-2336246	19990617
	AU 9946918	A1	20000110	AU 1999-46918	19990617
	BR 9911432	A	20010320	BR 1999-11432	19990617
	EP 1089985	A1	20010411	EP 1999-930365	19990617
	R:	AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE			
	JP 2002518486	T2	20020625	JP 2000-555878	19990617
	US 6348591	B1	20020219	US 1999-335883	19990618
PRAI	US 1998-90261P	P	19980622		
	WO 1999-US13707	W	19990617		
OS	MARPAT 132:64949				
AB	This invention relates generally to red-shifted trisaryl-1,3,5-triazines and the use thereof to protect against degradn. by environmental forces, inclusive of UV light, actinic radiation, oxidn., moisture, atm. pollutants and combinations thereof. The new class of trisaryl-1,3,5-triazines comprises an aryl ring attached to the triazine ring [and preferably an aryl ring contg. a hydroxyl group, either free or blocked to form a latent stabilizer, ortho- to the point of attachment to the triazine ring (2-position) and a hydroxyl group or a moiety joined by an ether linkage para- to the point of attachment to the triazine ring (4-position)] substituted at the 3-position or disubstituted at the 3- and 5-positions with a group comprising an amide and/or an amine. These materials may be incorporated into formulations comprising coatings, polymers, resins, org. compds. and the like. A method for stabilizing a material by incorporating such red-shifted trisaryl-1,3,5-triazines is also disclosed.				
ST	red shifted trisaryltriazine UV stabilizer				
IT	Polyimides, properties				
	Polyimides, properties				
	RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)				
	(polyamide-; red-shifted trisaryl-1,3,5-triazine UV light absorbers)				
IT	Polyimides, properties				
	Polyimides, properties				
	Polysulfones, properties				
	Polysulfones, properties				
	RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)				
	(polyether-; red-shifted trisaryl-1,3,5-triazine UV light absorbers)				

- IT Polyamides, properties
Polyamides, properties
Polyethers, properties
Polyethers, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(polyimide-; red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT Polyethers, properties
Polyethers, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(polysulfone-; red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT Cosmetics
Dyes
Inks
Paper
Photographic paper
UV stabilizers
(red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT Alkyd resins
Aminoplasts
Epoxy resins, properties
Natural rubber, properties
Phenolic resins, properties
Polyamides, properties
Polycarbonates, properties
Polyesters, properties
Polyethers, properties
Polyimides, properties
Polyketones
Polyolefins
Polyoxymethylenes, properties
Polyoxyphenylenes
Polysiloxanes, properties
Polysulfones, properties
Polythiophenylenes
Polyurethanes, properties
Synthetic rubber, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT 100-42-5D, Styrene, polymers
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(high-impact; red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT 253141-28-5P 253141-32-1P 253141-35-4P
253141-38-7P 253141-41-2P
RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)
(red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)
- IT 9002-86-2, Polyvinylchloride 9003-08-1, Formaldehyde melamine copolymer
9003-17-2, Polybutadiene 9003-35-4, Formaldehyde phenol copolymer
9003-53-6, Polystyrene 9003-54-7, SAN 9003-56-9, ABS 9004-36-8,
Cellulose acetate butyrate 9011-05-6, Formaldehyde urea copolymer
25014-41-9, Polyacrylonitrile
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(red-shifted trisaryl-1,3,5-triazine **UV light absorbers**)

SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9944255	A1	20000110	AU 1999-44255	19990607
BR 9911448	A	20010320	BR 1999-11448	19990607
EP 1087947	A2	20010404	EP 1999-927321	19990607
R: BE, DE, ES, FR, GB, IT, NL, SE				
JP 2002518485	T2	20020625	JP 2000-555877	19990607
TW 424104	B	20010301	TW 1999-88110160	19990617
US 6239275	B1	20010529	US 1999-335873	19990618
PRAI US 1998-90259P	P	19980622		
WO 1999-US12758	W	19990607		

OS MARPAT 132:64948

AB This invention relates generally to hindered phenol-substituted triazines and the use thereof to protect materials such as coatings, polymers, resins, org. compds. and the like against degrdn. by environmental forces, inclusive of UV light, actinic radiation, oxidn., moisture, atm. pollutants and combinations thereof. The new class of hindered phenol-substituted triazines includes a trisaryl-1,3,5-triazine in which one of the aryl groups is substituted by a group which comprises a hindered phenol or is a hindered phenol and is further substituted by a hydroxyl group, either free or blocked to form a latent stabilizer, ortho- to the point of attachment to the triazine. These materials may, under the appropriate circumstances, form oligomers. A method for stabilizing a material by incorporating such hindered phenol-substituted triazines is also disclosed.

ST hindered phenol trisaryl triazine UV stabilizer

IT Dyes

(org.; trisaryl-1,3,5-triazine **UV light**
absorbers contg. hindered phenols)

IT Polyimides, properties

Polyimides, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(polyamide-; trisaryl-1,3,5-triazine **UV light**

absorbers contg. hindered phenols)

IT Polyimides, properties

Polyimides, properties

Polysulfones, properties

Polysulfones, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(polyether-; trisaryl-1,3,5-triazine **UV light**

absorbers contg. hindered phenols)

IT Polyamides, properties

Polyamides, properties

Polyethers, properties

Polyethers, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(polyimide-; trisaryl-1,3,5-triazine **UV light**

absorbers contg. hindered phenols)

IT Polyethers, properties

Polyethers, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(polysulfone-; trisaryl-1,3,5-triazine **UV light**

absorbers contg. hindered phenols)

IT Plastics, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(thermoplastics; trisaryl-1,3,5-triazine **UV light**

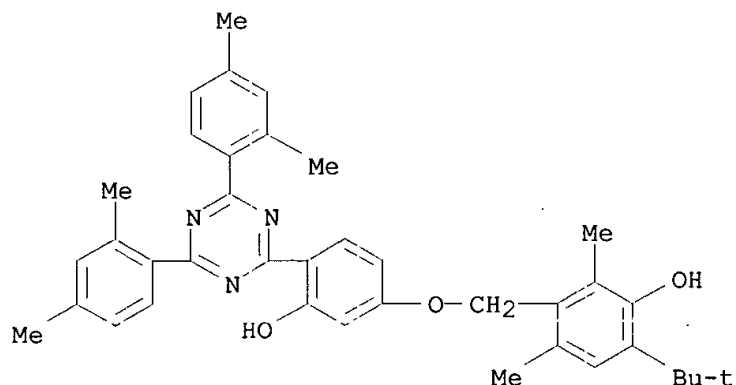
absorbers contg. hindered phenols)

- IT Cosmetics
 - Inks
 - Paper
 - Photographic paper
 - UV stabilizers
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT Alkyd resins
 - Aminoplasts
 - Epoxy resins, properties
 - Natural rubber, properties
 - Phenolic resins, properties
 - Polyamides, properties
 - Polycarbonates, properties
 - Polyesters, properties
 - Polyethers, properties
 - Polyimides, properties
 - Polyketones
 - Polyolefins
 - Polyoxymethylenes, properties
 - Polyoxyphenylenes
 - Polysiloxanes, properties
 - Polysulfones, properties
 - Polythiophenylenes
 - Polyurethanes, properties
 - Synthetic rubber, properties
 - RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT 100-42-5D, Styrene, polymers
 - RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (high-impact; trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT **253137-69-8P 253137-71-2P**
 - RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT 253137-70-1P
 - RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT 9002-86-2, Polyvinylchloride 9003-08-1, Formaldehyde melamine copolymer
 - 9003-17-2, Polybutadiene 9003-35-4, Formaldehyde phenol copolymer
 - 9003-53-6, Polystyrene 9003-54-7, SAN polymer 9003-56-9, ABS
 - 9004-36-8, Cellulose acetate butyrate 9011-05-6, Formaldehyde urea copolymer
 - 25014-41-9, Polyacrylonitrile
 - RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT 110-52-1 1421-49-4, 3,5-Di-tert-butyl-4-hydroxybenzoic acid 1668-53-7
 - 23500-79-0
 - RL: RCT (Reactant); RACT (Reactant or reagent)
 - (trisaryl-1,3,5-triazine **UV light absorbers**
 - contg. hindered phenols)
- IT **253137-69-8P**
 - RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)
 - (trisaryl-1,3,5-triazine **UV light absorbers**

contg. hindered phenols)

RN 253137-69-8 HCAPLUS

CN Phenol, 3-[[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]methyl]-6-(1,1-dimethylethyl)-2,4-dimethyl- (9CI) (CA INDEX NAME)



L17 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:597468 HCAPLUS

DN 131:200855

TI Preparation of 2,4-diaryl-6-o-hydroxyphenyl-1,3,5-triazine derivatives as light stabilizers

IN Stevenson, Tyler Arthur; Ackerman, Michael; Hayoz, Pascal; Meuwly, Roger; Oswald, John Francis; Schregenberger, Christian

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO Eur. Pat. Appl., 45 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07D251-24

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 28

FAN.CNT 1

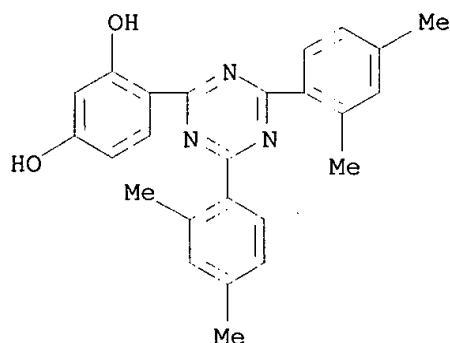
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 941989	A2	19990915	EP 1999-810156	19990222
	EP 941989	A3	20000112		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1232823	A	19991027	CN 1999-103156	19990302
	JP 11315072	A2	19991116	JP 1999-54443	19990302
	US 6242598	B1	20010605	US 2000-532222	20000322
PRAI	US 1998-33266	A	19980302		

OS MARPAT 131:200855

AB The title triazines are prepd. in the following three steps (starting with cyanuric halide or corresponding phenoxy- or alkoxy-substituted triazine): the nucleophilic displacement of one or two leaving groups in the triazine with a phenolic moiety; a Friedel-Crafts reaction using a Lewis acid catalyst (preferably aluminum chloride) to replace the remaining leaving group(s) with aryl groups such as xylyl; and finally replacing the phenolic moiety with a phenol such as resorcinol using preferably a protic acid catalyst or a combination of a Lewis acid and a protic acid catalyst. Alternatively, step 3 may be performed alone, e.g. starting from materials

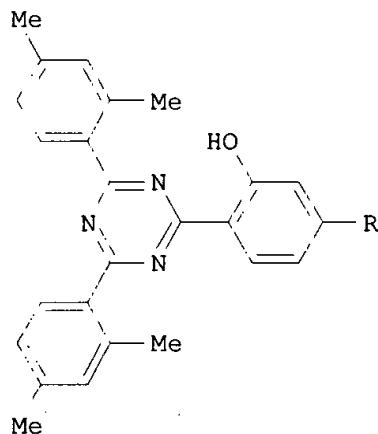
from other processes, or leading directly to a tris(hydroxyphenyl)-s-triazine. The s-triazines prep'd. are useful as **UV absorbers** for the stabilization of org. substrates against the adverse effects of actinic light.

- ST hydroxyphenyl triazine light stabilizers
 IT Light stabilizers
 (Prepn. of 2,4-diaryl-6-o-hydroxyphenyl-1,3,5-triazine derivs. as light stabilizers)
 IT 71-23-8, n-Propanol, reactions 108-38-3, reactions 108-46-3, Resorcinol, reactions 108-77-0, Cyanuric chloride 1237-53-2 3842-55-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (Prepn. of 2,4-diaryl-6-o-hydroxyphenyl-1,3,5-triazine derivs. as light stabilizers)
 IT **1668-53-7P** 2125-23-7P 2125-25-9P 2972-65-8P 24317-39-3P 38369-95-8P **176225-63-1P** 242143-64-2P 242143-65-3P 242143-66-4P 242143-67-5P
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (Prepn. of 2,4-diaryl-6-o-hydroxyphenyl-1,3,5-triazine derivs. as light stabilizers)
 IT **1668-53-7P**
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (Prepn. of 2,4-diaryl-6-o-hydroxyphenyl-1,3,5-triazine derivs. as light stabilizers)
 RN 1668-53-7 HCAPLUS
 CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI)
 (CA INDEX NAME)



- L17 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:355765 HCAPLUS
 DN 131:6605
 TI Triaryl-1,3,5-triazine **ultraviolet light absorbers**
 IN Gupta, Ram B.; Jakiela, Dennis J.; Haacke, Gottfried; Sassi, Thomas P.
 PA Cytec Technology Corp., USA
 SO PCT Int. Appl., 87 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07D251-24
 ICS C08K005-3492
 CC 42-5 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 28
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9926935	A1	19990603	WO 1998-US24698	19981120
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 9810605	A	19990525	ZA 1998-10605	19981119
	CA 2311538	AA	19990603	CA 1998-2311538	19981120
	AU 9915925	A1	19990615	AU 1999-15925	19981120
	AU 748175	B2	20020530		
	EP 1034169	A1	20000913	EP 1998-960289	19981120
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9814690	A	20001003	BR 1998-14690	19981120
	US 6265576	B1	20010724	US 1998-197747	19981120
	JP 2001524474	T2	20011204	JP 2000-522093	19981120
	NO 2000002161	A	20000714	NO 2000-2161	20000427
	US 2001037022	A1	20011101	US 2001-848195	20010503
	US 6365652	B2	20020402		
PRAI	US 1997-66357P	P	19971121		
	US 1998-197747	A3	19981120		
	WO 1998-US24698	W	19981120		
OS	MARPAT 131:6605				
GI					



I

AB Amido- or carbamate-substituted triaryl-1,3,5-triazines can be used to protect against degrdn. by environmental forces, inclusive of UV light, actinic radiation, oxidn., moisture, atm. pollutants, and combinations thereof. The class of triaryl-1,3,5-triazines comprises an aryl ring attached to the triazine ring (and preferably an aryl ring contg. a hydroxyl group, either free or blocked to form a latent stabilizer, ortho to the point of attachment to the triazine ring) substituted with a group comprising a bondable amido/carbamate-contg. group para to the point of attachment to the triazine ring. These materials may, under the appropriate circumstances, be bonded to formulations comprising coatings,

polymers, resins, org. compds., etc., via reaction of the bondable functionality with the materials of the formulation. Thus, triazine I (R = OH) was etherified with ClCH₂CO₂Et and the product was amidated with BuNHCH₂CH₂OH to give I (R = OCH₂CONBuCH₂CH₂OH) (II). When an acrylic-melamine resin compn. contg. 3% II was coated on a molded plastic article and cured 30 min at 135.degree., little migration of II into the plastic substrate occurred, compared with substantial (63%) migration when II was replaced by Cyagard UV 1164L.

- ST aryltriazine **UV absorber** coating stabilizer; amide deriv triaryltriazine **UV absorber**; carbamate deriv triaryltriazine **UV absorber**
- IT Polyurethanes, uses
RL: POF (Polymer in formulation); USES (Uses)
(acrylic; prepn. of nonmigrating triaryltriazine **UV light absorbers** for coatings based on)
- IT Polyester rubber
Synthetic rubber, miscellaneous
RL: MSC (Miscellaneous)
(butanediol-polytetramethylene glycol-terephthalic acid, block, block, substrate, Hytrel DYM 100; prepn. of triaryltriazine **UV light absorbers** which do not migrate from coatings into)
- IT Polyester rubber
RL: MSC (Miscellaneous)
(butanediol-polytetramethylene glycol-terephthalic acid, block, substrate, Hytrel DYM 100; prepn. of triaryltriazine **UV light absorbers** which do not migrate from coatings into)
- IT UV stabilizers
(prepn. of triaryltriazine **UV light absorbers**)
- IT Coating materials
(prepn. of triaryltriazine **UV light absorbers** for)
- IT 201341-52-8 225529-96-4
RL: POF (Polymer in formulation); USES (Uses)
(prepn. of nonmigrating triaryltriazine **UV light absorbers** for coatings based on)
- IT 225782-04-7P
RL: MOA (Modifier or additive use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of triaryltriazine **UV light absorbers**)
- IT 225529-89-5P 225782-03-6P 225782-05-8P 225782-06-9P 225782-07-0P 225782-08-1P
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(prepn. of triaryltriazine **UV light absorbers**)
- IT 105-39-5, Ethyl chloroacetate 110-73-6, 2-(Ethylamino)ethanol 111-42-2, reactions 111-75-1, 2-(Butylamino)ethanol 598-55-0, Methyl carbamate 1440-08-0 1668-53-7, 2-(2,4-Dihydroxyphenyl)-4,6-(2,4-dimethylphenyl)-1,3,5-triazine 2094-99-7, m-Isopropenylcumyl isocyanate 143695-85-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of triaryltriazine **UV light absorbers**)
- IT 1909-41-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
(prepn. of triaryltriazine **UV light absorbers**)

IT 154765-41-0, Joncryl CDX 588

RL: POF (Polymer in formulation); USES (Uses)
(prepn. of triaryltriazine **UV light absorbers** compatible with)

IT 106159-00-6, Butanediol-polytetramethylene glycol-terephthalic acid block copolymer

RL: MSC (Miscellaneous)
(rubber, substrate; prepn. of triaryltriazine **UV light absorbers** which do not migrate from coatings into)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Birbaum; US 5189084 A 1993 HCAPLUS

(2) Ciba-Geigy; EP 0434608 A 1991 HCAPLUS

(3) Ciba-Geigy; EP 0693483 A 1996 HCAPLUS

(4) Huber; US 3423360 A 1969

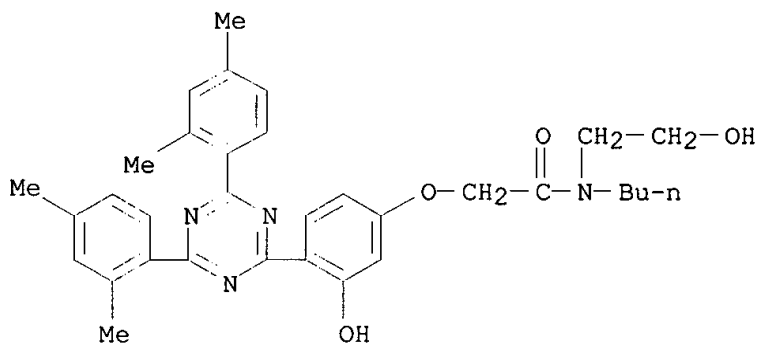
(5) Migdal; US 4962142 A 1990 HCAPLUS

IT 225782-04-7P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation);
PREP (Preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of triaryltriazine **UV light absorbers**)

RN 225782-04-7 HCAPLUS

CN Acetamide, 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-N-butyl-N-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:355764 HCAPLUS

DN 131:6604

TI Trisaryl-1,3,5-triazine **ultraviolet light absorbers**

IN Gupta, Ram B.; Jakiela, Dennis J.; Haacke, Gottfried

PA Cytec Technology Corp., USA

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D251-24

ICS C08K005-3492

CC 42-5 (Coatings, Inks, and Related Products)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	WO 9926934	A1	19990603	WO 1998-US24697	19981120
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	ZA 9810604	A	19990525	ZA 1998-10604	19981119
	US 6242597	B1	20010605	US 1998-195830	19981119
	CA 2310793	AA	19990603	CA 1998-2310793	19981120
	AU 9915924	A1	19990615	AU 1999-15924	19981120
	AU 748201	B2	20020530		
	EP 1032563	A1	20000906	EP 1998-960288	19981120
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9814224	A	20001003	BR 1998-14224	19981120
	TW 432054	B	20010501	TW 1998-87119272	19981120
	JP 2001524473	T2	20011204	JP 2000-522092	19981120
	NO 2000002160	A	20000719	NO 2000-2160	20000427
	US 2001031866	A1	20011018	US 2001-832613	20010411
	US 6355708	B2	20020312		
PRAI	US 1997-66358P	P	19971121		
	US 1998-195830	A3	19981119		
	WO 1998-US24697	W	19981120		
OS	MARPAT 131:6604				
AB	Bondable trisaryl-1,3,5-triazines contg. active (acidic) hydrocarbons are prepd. and used as UV light absorbers . The compds. are particularly useful, either alone or in combination with other additives, including other UV light absorbers and stabilizers, in stabilizing polymers and other materials from degrdn. by environmental forces such as actinic radiation (UV light), oxidn., moisture, atm. pollutants and combinations thereof.				
ST	reactive triazine UV light absorber ; acrylic melamine resin coating UV absorber ; weather resistant coating UV absorber ; polyurethane coating UV absorber				
IT	Aminoplasts Polyurethanes, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, coatings; bondable trisaryl triazine UV light absorbers for coatings)				
IT	UV stabilizers (bondable trisaryl triazine UV light absorbers for polymers)				
IT	Aminoplasts RL: POF (Polymer in formulation); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (bondable trisaryl triazine UV light absorbers for polymers)				
IT	Coating materials (light-resistant; bondable trisaryl triazine UV light absorbers for coatings)				

IT Coating materials
(transparent; bondable trisaryl triazine **UV light absorbers** for coatings)

IT Coating materials
(weather-resistant; bondable trisaryl triazine **UV light absorbers** for coatings)

IT 225529-70-4P 225529-74-8P 225529-77-1P
RL: MOA (Modifier or additive use); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
(bondable trisaryl triazine **UV light absorbers** for polymers)

IT 9003-08-1
RL: POF (Polymer in formulation); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(bondable trisaryl triazine **UV light absorbers** for polymers)

IT 141-97-9, Ethyl acetoacetate 1440-08-0 143695-85-6 225529-89-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(bondable trisaryl triazine **UV light absorbers** for polymers)

IT 201341-52-8P, Cymel 303-Joncryl 510 copolymer 225529-96-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coatings; bondable trisaryl triazine **UV light absorbers** for coatings)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

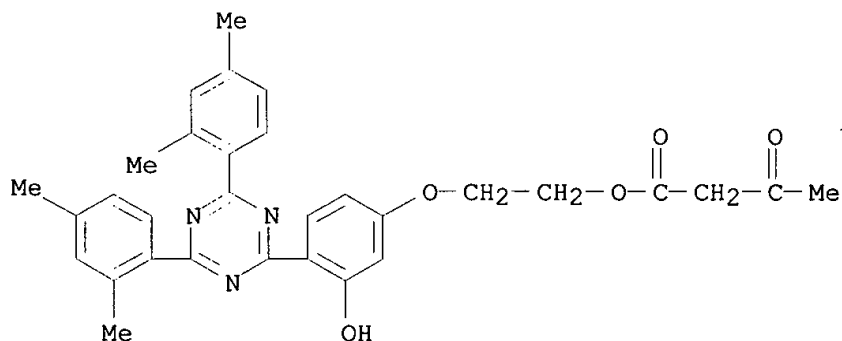
(1) Birbaum, J; US 5189084 A 1993 HCAPLUS

(2) Ciba Geigy; DE 2113833 A 1971 HCAPLUS

IT 225529-70-4P
RL: MOA (Modifier or additive use); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
(bondable trisaryl triazine **UV light absorbers** for polymers)

RN 225529-70-4 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]ethyl ester (9CI) (CA INDEX NAME)

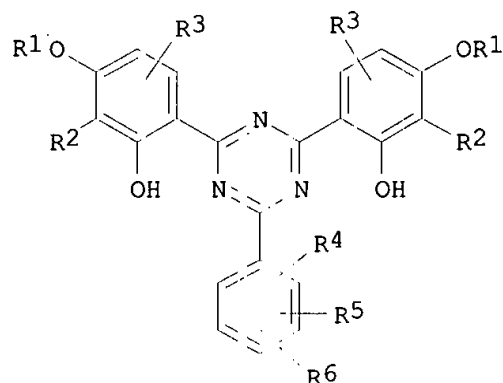


L17 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:182560 HCAPLUS
DN 130:283116

TI Triazine compounds, **UV absorbers** therefrom, fibers or polymer compositions containing the absorbers, and discoloration-, heat-, and weather-resistant films or coatings therefrom
 IN Tobita, Etsuo; Nanbu, Yoko; Ishikawa, Shinichi; Ayabe, Keishi
 PA Asahi Denka Kogyo K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07D251-24
 ICS C08K005-3492; C09K003-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 35, 37, 40, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11071356	A2	19990316	JP 1997-249723	19970829
OS	MARPAT 130:283116				
GI					



I

AB The triazines are represented as I [R1 = C1-12 alkyl, C3-8 cycloalkyl, C3-8 alkenyl, C6-18 aryl, alkaryl, aralkyl (these groups may be substituted with OH, halo, C1-12 alkyl, or alkoxy and/or interrupted by O, S, CO, ester, amide, or imino); R2 = C1-8 alkyl, C3-8 alkenyl; R3-R6 = H, halo, OH, C1-12 alkyl, alkoxy, alkoxycarbonyl, aralkyl]. Thus, 2,4-dichloro-6-(2,4-dimethylphenyl)-s-triazine reacted with 2-methylresorcinol and MeI to give I (R1 = R2 = Me; R3 = R6 = H; R4 = 2-Me; R5 = 4-Me), 10 parts of which was mixed with 100 parts bisphenol A polycarbonate and coextruded with a resin for a substrate. The resulting laminate showed color difference 7.1 after irradiation with a high-pressure Hg lamp for 2 wk.

ST triazine **UV absorber** coating heat resistance; weather resistant film triazine **UV absorber**; bisphenol A polycarbonate triazine **UV absorber**; methylresorcinol triazine **UV absorber** discoloration resistance; methyl iodide triazine **UV absorber** fiber

IT Heat-resistant materials
 Plastic films
 Textiles
 (triazine compds. as **UV absorbers** for)

IT Aminoplasts
 Polycarbonates, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (triazine compds. as **UV absorbers** for)

IT UV stabilizers
 (triazine derivs.; triazine compds. as **UV absorbers**
 for discoloration-, heat-, and weather-resistant films or coatings)

IT Coating materials
 (weather-resistant; triazine compds. as **UV absorbers**
 for)

IT 222529-66-0
 RL: MOA (Modifier or additive use); USES (Uses)
 (**UV absorber**; triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)

IT 221653-84-5P
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)
 (intermediate; prepn. of triazine compds. as **UV absorbers**)

IT 74-88-4, Methyl iodide, reactions 108-77-0, Cyanuric chloride
 111-25-1, Hexyl bromide 143-15-7, Lauryl bromide 540-51-2,
 2-Bromoethanol 608-25-3 1330-20-7, Xylene, reactions 73692-54-3,
 Triethylene glycol glycidyl methyl ether 91064-30-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of triazine compds. as **UV absorbers**)

IT 25035-89-6P, Butyl acrylate-2-hydroxyethyl methacrylate-methacrylic
 acid-methyl methacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (triazine compds. as **UV absorbers** for)

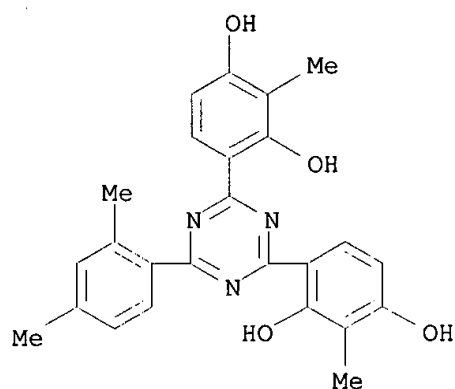
IT 9002-86-2, Poly(vinyl chloride) 9003-08-1, Melamine-formaldehyde
 copolymer 9004-36-8, Cellulose acetate butyrate 9010-79-1,
 Ethylene-propylene copolymer 24936-68-3, uses 25037-45-0, Bisphenol
 A-carbonic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (triazine compds. as **UV absorbers** for)

IT 222529-65-9P 222529-68-2P 222529-69-3P
 222529-70-6P 222529-71-7P 222529-72-8P
 RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); **PREP (Preparation)**; USES (Uses)
 (triazine compds. as **UV absorbers** for
 discoloration-, heat-, and weather-resistant films or coatings)

IT 221653-84-5P
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)
 (intermediate; prepn. of triazine compds. as **UV absorbers**)

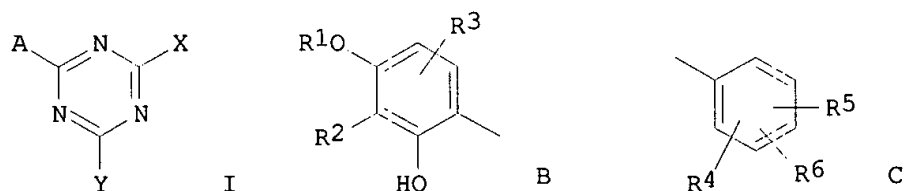
RN 221653-84-5 HCAPLUS

CN 1,3-Benzenediol, 4,4'-[6-(2,4-dimethylphenyl)-1,3,5-triazine-2,4-diyl]bis[2-methyl- (9CI) (CA INDEX NAME)



L17 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:182559 HCAPLUS
 DN 130:253785
 TI Triazine compounds, **UV absorbers** therefrom, polymer compositions containing the absorbers, and discoloration-, heat-, and weather-resistant films or coatings therefrom
 IN Tobita, Etsuo; Nanbu, Yoko; Ishikawa, Shinichi; Ayabe, Keishi
 PA Asahi Denka Kogyo K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07D251-24
 ICS C08K005-3492; C09K003-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11071355	A2	19990316	JP 1997-249722	19970829
OS	MARPAT 130:253785				
GI					

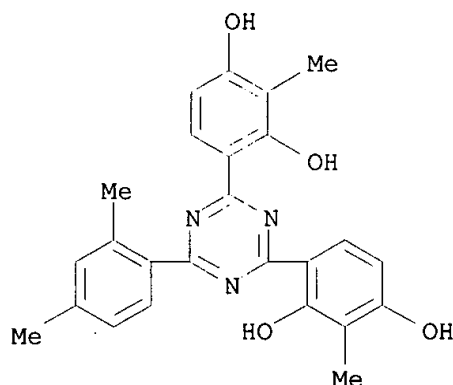


AB Triazines are expressed by compds. I [A = ring B; X, Y = ring B, C; ring B = 2-OH-, 3-R2-, 4-R1O-, and R3-substituted Ph; ring C = R4, R5, R6-substituted Ph; R1 = (meth)acryloyl- or glycidyoxy-substituted C1-25 alkyl (this alkyl may be substituted with OH, C1-8 alkoxy, or acyloxy and inserted with O, S, carbonyl, ester, amide, imino); R2 = C1-8 alkyl; R3-R6 = H, halo, OH, C1-12 alkyl, alkenyl, alkoxy(carbonyl), arylalkyl (the alkyl, alkoxy(carbonyl), arylalkyl may be substituted with OH, halo, C1-12 alkyl, alkoxy, SO3H, glycidyoxy, CN, NCO, (meth)acryloyl and inserted

with O, S, carbonyl, ester, amide, imino)]. Thus, 2-hydroxy-4,6-bis(4-methylphenyl)-s-triazine was reacted with thionyl chloride and subsequently with 2-methylresorcinol and glycidyl methacrylate to give I (X = Y = p-tolyl; A = Ph substituted with OH, Me, and H₂C:CMcCO₂CH₂C(OH)HCH₂O at 2,3,4-positions, resp.), 10 parts of which was mixed with 100 parts bisphenol A polycarbonate and coextruded with a resin substrate. The laminate showed color difference 7.0 after irradiation with a high-pressure Hg lamp for 2 wk.

- ST hydroxyphenyltriazine **UV absorber** coating heat resistance; triazine **UV absorber** weather resistant film; bisphenol A polycarbonate triazine **UV absorber**; methylresorcinol triazine **UV absorber**; glycidyl methacrylate triazine **UV absorber**
- IT Heat-resistant materials
Plastic films
UV stabilizers
(triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT Aminoplasts
Polycarbonates, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT Coating materials
(weather-resistant; triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT 79-41-4DP, Methacrylic acid, reaction product with bromoethanol and triazines 106-91-2DP, Glycidyl methacrylate, reaction products with hydroxymethylphenyltriazine and methylresorcinol 540-51-2DP, 2-Bromoethanol, reaction product with triazines and methacrylic acid 608-25-3DP, 2-Methylresorcinol, reaction products with hydroxymethylphenyltriazine and glycidyl methacrylate 26142-30-3DP, reaction product with triazines 30886-10-3DP, reaction products with methylresorcinol and glycidyl methacrylate 91064-30-1DP, reaction product with methylresorcinol, bromoethanol, and methacrylic acid 221653-82-3DP, reaction product with bromoethanol and methacrylic acid 221653-84-5DP, reaction product with glycidyloxyheptapropoxyglycidyl
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(**UV absorber**; triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT 221653-83-4 221653-85-6
RL: MOA (Modifier or additive use); USES (Uses)
(**UV absorber**; triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT 25035-89-6P, Butyl acrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(triazine compds. as **UV absorbers** for discoloration-, heat-, and weather-resistant films or coatings)
- IT 9002-86-2, Poly(vinyl chloride) 9003-08-1, Melamine-formaldehyde copolymer 9004-36-8 9010-79-1, Ethylene-propylene copolymer 24936-68-3, uses 25037-45-0
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

engineered material use); USES (Uses)
 (triazine compds. as **UV absorbers** for
 discoloration-, heat-, and weather-resistant films or coatings)
 IT **221653-84-5DP**, reaction product with glycidyloxyheptapropoxyglycid
 yl
 RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive
 use); **PREP (Preparation)**; USES (Uses)
 (**UV absorber**; triazine compds. as **UV**
absorbers for discoloration-, heat-, and weather-resistant
 films or coatings)
 RN 221653-84-5 HCAPLUS
 CN 1,3-Benzenediol, 4,4'-[6-(2,4-dimethylphenyl)-1,3,5-triazine-2,4-
 diyl]bis[2-methyl- (9CI) (CA INDEX NAME)



L17 ANSWER 16 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1998:424293 HCAPLUS
 DN 129:110164
 TI Durability enhancing agents for coating compositions and their application
 to a substrate
 IN Reh fuss, John W.; Ohrbom, Walter H.; St. Aubin, Donald L.; Boisseau, John
 E.; Oberg, Patricia K.
 PA Basf Corp., USA
 SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C08K005-00
 ICS C08L101-06; C09D007-12; C08K005-00; C08K005-3435; C08K005-3475;
 C08K005-3492
 CC 42-5 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9827146	A1	19980625	WO 1997-US23004	19971210
	W: AU, BR, CA, CN, JP, KR, MX				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6037441	A	20000314	US 1996-769622	19961218
	US 6147163	A	20001114	US 1996-769289	19961218
	US 6166148	A	20001226	US 1996-769245	19961218
	CA 2253202	AA	19980625	CA 1997-2253202	19971210
	AU 9856036	A1	19980715	AU 1998-56036	19971210

AU 730540 B2 20010308
 BR 9711428 A 19990824 BR 1997-11428 19971210
 EP 946631 A1 19991006 EP 1997-952433 19971210
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI

CN 1233264 A 19991027 CN 1997-194840 19971210
 JP 2001511823 T2 20010814 JP 1998-527876 19971210
 KR 2000015994 A 20000325 KR 1998-709555 19981121
 US 6180240 B1 20010130 US 1999-271784 19990318

PRAI US 1996-769245 A 19961218
 US 1996-769289 A 19961218
 US 1996-769622 A 19961218
 WO 1997-US23004 W 19971210

- AB A durability enhancing agent is an **UV light absorbing** compd. or hindered amine light stabilizer covalently bonded to a monomeric, oligomeric or polymeric component, further having >1 carbamate functional group, group convertible to a carbamate group, or group that is cross-linked via a carbamate group. Thus, a coating compn. contained Ureclear binder 75.51, Resimene 747 20.66, catalyst 1.00, SiO₂ 1.31, flow additive 0.20, adhesion promoter 1.32 and 2% durability enhancing agent Ureclear adduct with Norblock 7966' stabilizer was applied to a substrate and cured to give a coating film having etch resistance rating (10 wk) 3-4; vs. 6 for the coating without the durability enhancing agent.
- ST etch resistance stabilizer coating material; weatherability light stabilizer coating material; carbamate functional light stabilizer coating; HALS carbamate functional resin coating
- IT Light stabilizers
 (carbamate-functional HALS; durability enhancing agents for coating compns.)
- IT Amines, uses
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (hindered, carbamate-functional, light stabilizers; durability enhancing agents for coating compns.)
- IT Aminoplasts
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (reaction products with isophorone diisocyanate and hydroxypropyl carbamate and hydroxy functional triazine; durability enhancing agents for coating compns.)
- IT Coating materials
 (weather-resistant; durability enhancing agents for coating compns.)
- IT 209954-24-5, Formaldehyde-melamine-Ureclear copolymer
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (coating; durability enhancing agents for coating compns.)
- IT **1668-53-7DP**, alkyl derivs., reaction products with isophorone diisocyanate and hydroxypropyl carbamate 4098-71-9DP, reaction products with hydroxypropyl carbamate and hydroxy functional triazine 9003-08-1DP, Cymel 300, reaction products with isophorone diisocyanate and hydroxypropyl carbamate and hydroxy functional triazine 69493-47-6DP, Hydroxypropyl carbamate, reaction products with isophorone diisocyanate and hydroxy functional triazine 73666-46-3DP, T 1890, reaction products with hydroxy functional triazine 96478-09-0DP, reaction products with hydroxy functional carbamate resin 204934-30-5DP, Ureclear, reaction products with functional benzotriazole
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (durability enhancing agents for coating compns.)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Cytec; EP 0680988 A 1995 HCAPLUS

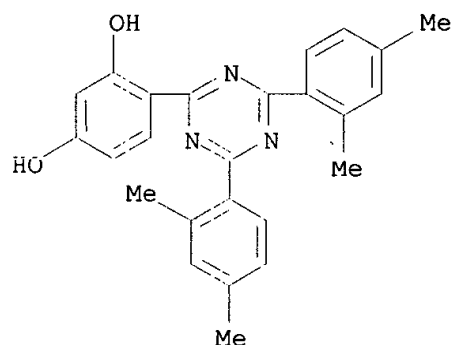
IT 1668-53-7DP, alkyl derivs., reaction products with isophorone diisocyanate and hydroxypropyl carbamate

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(durability enhancing agents for coating compns.)

RN 1668-53-7 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI)
(CA INDEX NAME)



L17 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:397829 HCAPLUS

DN 129:40976

TI High molecular weight dibenzoylresorcinol UV absorbers

IN Pickett, James Edward; Simonian, Amy Kathleen

PA General Electric Co., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C07C049-786

NCL 568333000

CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5763674	A	19980609	US 1996-762644	19961209
	US 5905172	A	19990518	US 1997-963814	19971104
	JP 10251191	A2	19980922	JP 1997-331549	19971202
	EP 846673	A1	19980610	EP 1997-309849	19971208
	EP 846673	B1	20001227		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

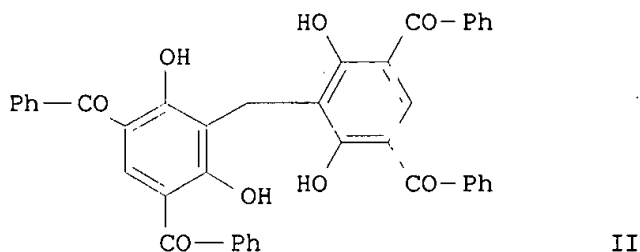
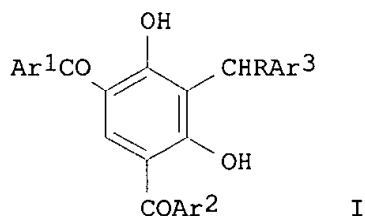
US 6037059 A 20000314 US 1998-177589 19981023

PRAI US 1996-762644 A3 19961209

US 1997-963814 A3 19971104

OS CASREACT 129:40976; MARPAT 129:40976

GI



- AB The title compds. [I; Ar1, Ar2 = (un)substituted monocyclic or polycyclic aryl groups; R = H, aryl, or a linear or branched alkyl chain; Ar3 = aryl group bearing at least one OH] are prepd. I are capable of **absorbing UV light** and compatible in coating compns. to improve the weatherability of thermoplastic substrates. Thus, I (Ar1 = Ar2 = Ph, R = H, Ar3 = AcO) (prepn. given) was coupled with 4,6-dibenzoylresorcinol in the presence of conc. H2SO4 in AcOH to give 84% the title compd. (II).
- ST dibenzoylresorcinol prepn **UV absorber** coupling reaction
- IT UV stabilizers
(prepn. of dibenzoylresorcinols as **UV absorbers**)
- IT Coupling reaction
Coupling reaction catalysts
(prepn. of dibenzoylresorcinols by coupling reaction)
- IT 7664-93-9, Sulfuric acid, uses
RL: CAT (Catalyst use); USES (Uses)
(prepn. of dibenzoylresorcinols as **UV absorbers**)
- IT 208404-01-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of dibenzoylresorcinols as **UV absorbers**)
- IT 200119-81-9P 208404-02-8P 208404-03-9P 208404-04-0P 208404-05-1P
208404-06-2P 208404-07-3P 208404-08-4P **208404-09-5P**
208446-54-2P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of dibenzoylresorcinols as **UV absorbers**)
- IT 108-95-2, Phenol, reactions 131-53-3, 2,2'-Dihydroxy-4-methoxybenzophenone 131-56-6, 2,4-Dihydroxybenzophenone 1843-05-6, 2-Hydroxy-4-octyloxybenzophenone 2725-22-6 3088-15-1, 4,6-Dibenzoylresorcinol 30525-89-4, Paraformaldehyde 52117-23-4, 2,4-Dihydroxy-3-methylbenzophenone 85279-80-7 166255-26-1
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of dibenzoylresorcinols as **UV absorbers**)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; 1984 HCAPLUS
- (2) Karvas, M; 1972 HCAPLUS
- (3) Kubota, N; Coatings, "Heterocycles" 1986, V105, P649 HCAPLUS
- (4) Kubota, N; Noncondensed Aromatics 1979, V91, P617

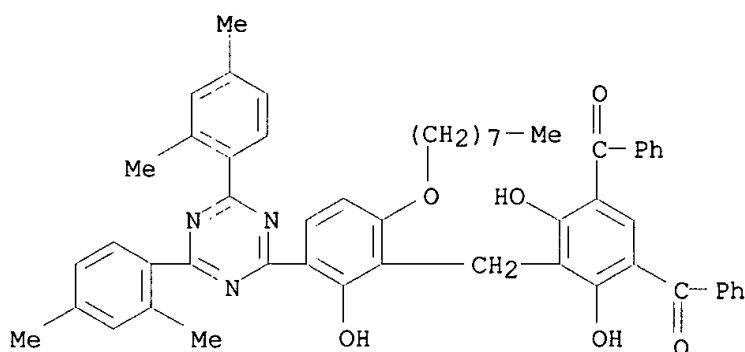
IT 208404-09-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of dibenzoylresorcinols as **UV absorbers**)

RN 208404-09-5 HCAPLUS

CN Methanone, [5-[[3-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-2-hydroxy-6-(octyloxy)phenyl]methyl]-4,6-dihydroxy-1,3-phenylene]bis[phenyl-
(9CI) (CA INDEX NAME)



L17 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:87716 HCAPLUS

DN 128:154827

TI Polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivatives as **UV absorbers**

IN Toan, Vien Van; Valet, Andreas; Hayoz, Pascal

PA Ciba Specialty Chemicals Holding Inc., Switz.; Toan, Vien Van; Valet, Andreas; Hayoz, Pascal

SO PCT Int. Appl., 152 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D251-24

ICS C08K005-34; C07D249-20; C07C049-84

CC 37-2 (Plastics Manufacture and Processing)

Section cross-reference(s): 28, 38, 42, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9803489	A1	19980129	WO 1997-EP3567	19970707
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,				

GN, ML, MR, NE, SN, TD, TG

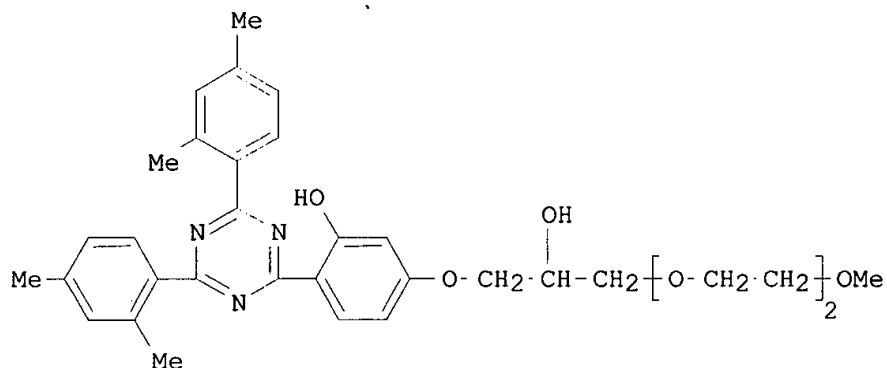
CA 2258523	AA	19980129	CA 1997-2258523	19970707
AU 9736204	A1	19980210	AU 1997-36204	19970707
EP 912531	A1	19990506	EP 1997-932777	19970707

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

BR 9710730	A	19990817	BR 1997-10730	19970707
JP 2000515141	T2	20001114	JP 1998-506485	19970707
TW 440564	B	20010616	TW 1997-86110045	19970716
US 6369267	B1	20020409	US 2000-679231	20001004
US 2002094320	A1	20020718	US 2001-6634	20011108

PRAI CH 1996-1806 A 19960718
 WO 1997-EP3567 W 19970707
 US 1999-214859 B3 19990113
 US 2000-679231 A3 20001004
 MARPAT 128:154827

OS
 GI



- AB Triazine, benzotriazole and benzophenone derivs. which are substituted or bridged with polyoxyalkylene groups, according to claim 1, and their use as **UV absorbers**, esp. in photog. materials, in inks, including ink-jet inks and printing inks, in transfer prints, in paints and varnishes, org. polymeric materials, plastics, rubber, glass, packaging materials, in sunscreens of cosmetic preps. and in skin protection compns. are disclosed. Diethylene glycol Me glycidyl ether was treated with 2,4-bis(2,4-dimethylphenyl)-6-(2,4-dihydroxyphenyl)-s-triazine to give I.
- ST light stabilizer polyoxyalkylene triazine; benzotriazole polyoxyalkylene light stabilizer; benzophenone polyoxyalkylene light stabilizer; coating light stabilizer; polymer light stabilizer; plastic light stabilizer; rubber light stabilizer; glass **UV absorber**; packaging material light stabilizer; cosmetic light stabilizer
- IT Coating materials
 Coating materials
 (light-resistant; polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)
- IT Cosmetics
 Light stabilizers
 Packaging materials
 (polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)
- IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT Polymers, uses

RL: POF (Polymer in formulation); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT 929-59-9P 202411-78-7P 202411-79-8P
202411-80-1P 202411-81-2P 202411-82-3P
202411-83-4P 202411-84-5P 202411-85-6P 202411-86-7P
202411-87-8P 202411-88-9P 202411-89-0P 202411-90-3P 202411-91-4P
202411-92-5P 202411-93-6P 202411-94-7P 202411-95-8P
202411-97-0P 202411-98-1P 202411-99-2P
202412-00-8P 202412-01-9P 202412-02-0P 202412-04-2P
202412-06-4P 202412-10-0P 202412-11-1P 202412-12-2P 202412-13-3P
202412-14-4P 202412-15-5P 202412-16-6P
202412-17-7P 202412-18-8P 202412-19-9P 202412-20-2P
202412-21-3P 202412-22-4P 202412-23-5P 202412-24-6P 202412-25-7P
202412-26-8P 202412-27-9P 202412-28-0P 202412-29-1P
202412-30-4P 202412-31-5P 202412-32-6P 202412-33-7P
202412-34-8P 202412-35-9P 202412-36-0P 202412-37-1P 202412-38-2P
202412-39-3P 202412-40-6P 202412-41-7P 202412-42-8P
202412-43-9P 202412-44-0P 202412-45-1P
202412-48-4P 202412-49-5P 202412-50-8P 202483-41-8P
202483-42-9P 202483-43-0P 202533-62-8P
202533-65-1P 202533-68-4P 202533-70-8P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT 189751-54-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT 1954-28-5P, Triethylene glycol diglycidyl ether 4206-61-5P, Diethylene glycol diglycidyl ether 14435-45-1P 17626-93-6P, Tetraethylene glycol diglycidyl ether 26403-72-5P 26951-52-0P, Polytetramethylene glycol diglycidyl ether 28607-80-9P 35625-91-3P 40349-67-5P 50522-30-0P 71712-93-1P 73692-54-3P 87257-02-1P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT 41556-26-7

RL: MOA (Modifier or additive use); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

IT 106-89-8, reactions 111-77-3 111-90-0 112-35-6 112-50-5
131-56-6, 2,4-Dihydroxybenzophenone 143-22-6 1668-53-7 9004-74-4
9004-77-7 9046-10-0 22607-31-4 24979-97-3 38369-95-8 39927-08-7,
Polyethylene glycol bis(carboxymethyl) ether 77110-54-4, Jeffamine M-600
83713-01-3, Jeffamine M-2070 84268-33-7 84268-36-0 143451-01-8
200410-65-7 200410-81-7 202411-96-9 202412-08-6 202412-46-2
202412-47-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as **UV absorbers**)

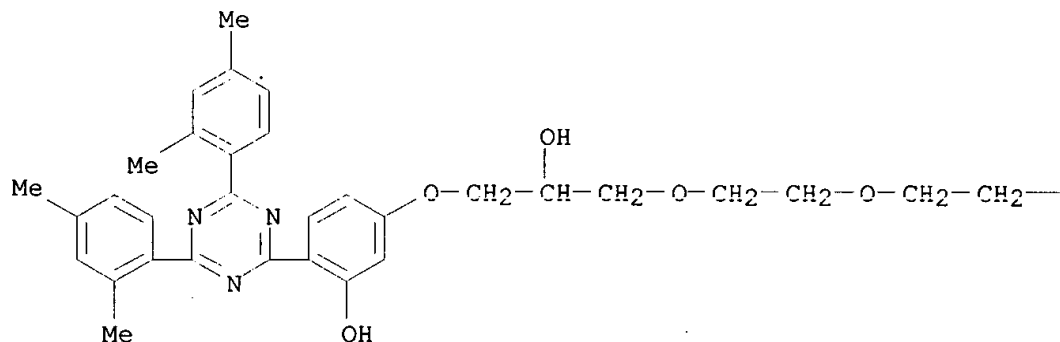
IT 202411-78-7P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(polyoxyalkene substituted and bridged triazine, benzotriazole and benzophenone derivs. as UV absorbers)

RN 202411-78-7 HCAPLUS

CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-[2-hydroxy-3-[2-(2-methoxyethoxy)ethoxy]propoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—OMe

L17 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:59358 HCAPLUS

DN 128:154905

TI Triazines, their use as UV absorbers, and polymer compositions containing them with long-lasting light resistance

IN Haruna, Toru; Tobita, Etsuo; Nanbe, Yoko

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07D251-24

ICS C08K005-3492; C08L067-02; C08L069-00; C09K003-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 40, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10017557	A2	19980120	JP 1996-195577	19960705
OS	MARPAT 128:154905				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB **UV absorbers**, which are less volatile and show good compatibility with arom. polymers, comprise triazines I (R1 = CO, R7OCO2R8, CO2R9O2C, R1OOCO2R11OCO2R12; R7-R12 = C1-8 alkylene, arylene; the alkylene of R7, R8 may be substituted with OH; R2-R6 = H, halo, OH, C1-10 alkyl, alkoxy, alkoxycarbonyl). Polymer compns. (e.g. polycarbonates and polyesters) contg. the absorbers are also claimed. Thus, an injection molding contg. ethylene-propylene copolymer and **UV absorber II** showed good **yellowing** resistance in a sunshine weatherometer test.
- ST triazine **UV absorber** ethylene propylene copolymer; light **yellowing** resistance triazine **UV absorber**; polycarbonate polyester **UV absorber** triazine
- IT Polyester fibers, properties
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(fabrics; triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT Coating materials
Coating materials
(light-resistant; triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT UV stabilizers
Yellowing prevention
Yellowing prevention
(triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT Polycarbonates, properties
Polyesters, properties
Polyoxyphenylenes
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT 102-09-0, Diphenyl carbonate 1440-08-0 201987-25-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT 201988-31-0P 201988-34-3P
RL: IMF (**Industrial manufacture**); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT 201988-36-5 201988-40-1
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(triazines as **UV absorbers** for polymer compns. with long-lasting light resistance)
- IT 9002-86-2, PVC 9010-79-1, Ethylene-propylene copolymer 9041-80-9, Polyoxyphenylene 24936-68-3, Bisphenol A polycarbonate, properties 25037-45-0, Bisphenol A-carbonic acid copolymer 27073-41-2, Phenol homopolymer
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

engineered material use); USES (Uses)
(triazines as **UV absorbers** for polymer compns. with
long-lasting light resistance)

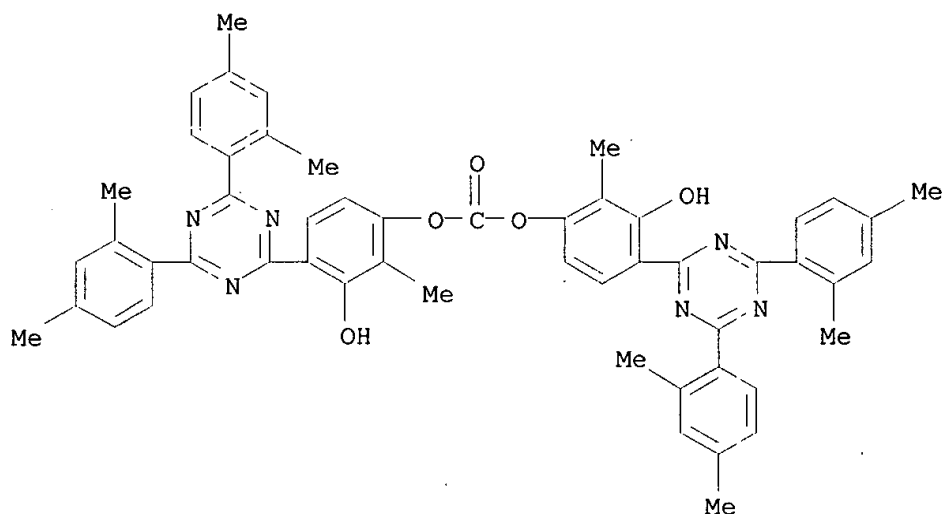
IT 201988-31-0P

RL: IMF (Industrial manufacture); MOA (Modifier or additive
use); PRP (Properties); TEM (Technical or engineered material use);
PREP (Preparation); USES (Uses)

(triazines as **UV absorbers** for polymer compns. with
long-lasting light resistance)

RN 201988-31-0 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-2-
methyl-, 1,1'-carbonate (9CI) (CA INDEX NAME)



L17 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:59357 HCAPLUS

DN 128:154904

TI Triazines, their use as **UV absorbers**, and thin film
and fibrous compositions containing them

IN Tobita, Etsuo; Nanbu, Yoko; Ishikawa, Shinichi

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07D251-24

ICS C09K003-00; C08K005-3492

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 40, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10017556	A2	19980120	JP 1996-192962	19960703
OS	MARPAT 128:154904				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB **UV absorbers**, which show good heat resistance and cause no discoloration to org. materials (no data), comprise triazines I [n = 1, 2; when n = 1, then R1 = H, C1-12 linear or branched alkyl, glycidyl, C3-8 cycloalkyl, etc.; when n = 2, then R1 = (un)substituted C1-8 linear or branched alkylene, (un)substituted C3-8 cycloalkylene, (un)substituted C6-18 arylene (bonded via O, S, CO, ester group, amide group, imino group); R2 = C1-8 alkyl; R3-R6 = H, halo, OH, C1-12 alkyl, alkoxy, alkoxycarbonyl, arylalkyl]. Thin film compns. (e.g. coatings and films) and fibrous compns. contg. the **UV absorbers** are also claimed. Thus, a sheet contg. ethylene-propylene copolymer and **UV absorber II** showed good **yellowing** resistance in a sunshine weatherometer test.
- ST triazine **UV absorber** ethylene propylene copolymer; light **yellowing** resistance triazine **UV absorber**; coating film fiber **UV absorber** triazine
- IT Polyester fibers, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(fabrics; triazines as **UV absorbers** for coatings, films, and fibers)
- IT Coating materials
Coating materials
(light-resistant; triazines as **UV absorbers** for coatings, films, and fibers)
- IT Films
UV stabilizers
Yellowing prevention
Yellowing prevention
(triazines as **UV absorbers** for coatings, films, and fibers)
- IT Polycarbonates, properties
Synthetic fibers
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(triazines as **UV absorbers** for coatings, films, and fibers)
- IT 106-94-5, Propyl bromide 608-25-3, 2-Methylresorcinol 1237-53-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of triazines as **UV absorbers** for coatings, films, and fibers)
- IT 201987-25-9P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(triazines as **UV absorbers** for coatings, films, and fibers)
- IT 201987-26-0P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(triazines as **UV absorbers** for coatings, films, and fibers)
- IT 201987-27-1 201987-28-2
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

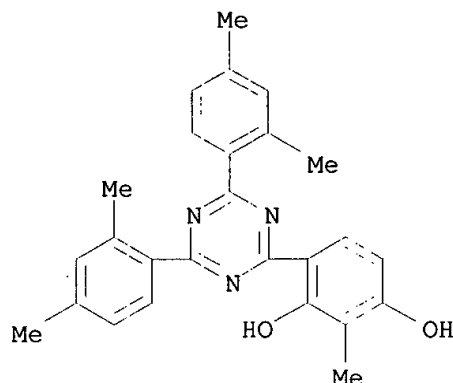
(triazines as **UV absorbers** for coatings, films, and fibers)

IT 9002-86-2, PVC 9010-79-1, Ethylene-propylene copolymer 24936-68-3, Bisphenol A polycarbonate, properties 25035-89-6, Butyl acrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer 25037-45-0, Bisphenol A-carbonic acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (triazines as **UV absorbers** for coatings, films, and fibers)

IT **201987-25-9P**
 RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); PRP (Properties); RCT (Reactant); **PREP (Preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)
 (triazines as **UV absorbers** for coatings, films, and fibers)

RN 201987-25-9 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-2-methyl- (9CI) (CA INDEX NAME)



L17 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:280882 HCAPLUS

DN 126:278290

TI Polymeric **UV-absorbing** agents and compositions containing them

IN Nakahara, Yutaka; Nanbu, Yoko

PA Asahi Denka Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F020-36
 ICS C09K003-00

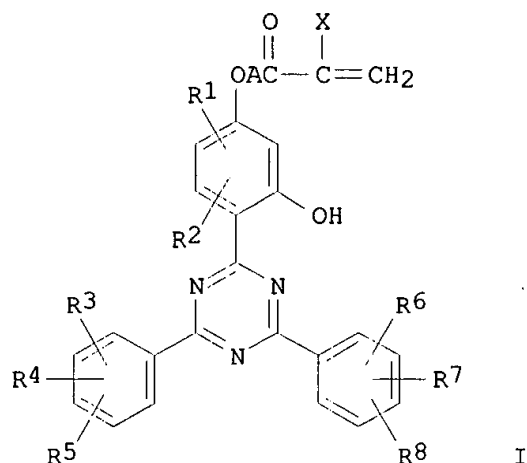
CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 35

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09052916	A2	19970225	JP 1995-227074	19950811

PI

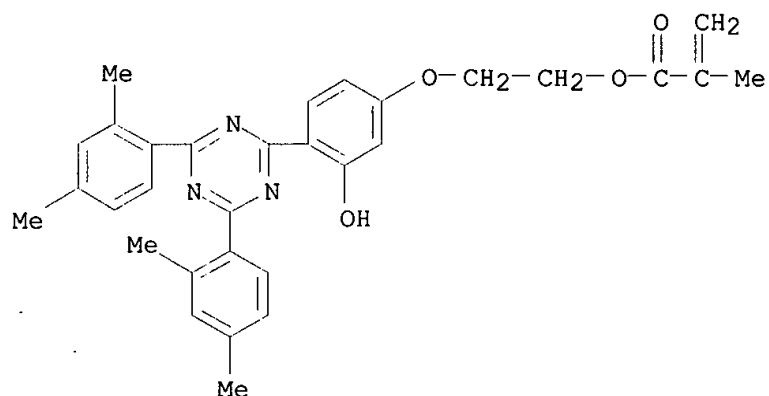
GI



- AB Homopolymer of compd. I and copolymer of I with other monomers are synthesized and used in polymer compns. as **UV-absorbing** agent [A = single bond, (CH₂CH₂O)_n, CH₂CH(OH), CH₂O; X = H, Me; R₁-8 = H, C₁-10 alkyl, alkenyl, alkoxy; n = 1-5]. A test piece made from an ethylene-propylene copolymer compn. contg. 0.3 phr of copolymer of I (A = CH₂CH₂O; X = Me; R₁, R₂, R₃, R₆ = H; R₄, R₅, R₇, R₈ = Me) and Me methacrylate was subjected to a weather resistant test which comprises cycles of 18-min rain per 120 min and show crack after 2800 h and **yellowing** degree 4.8 and 7.7 after 500 and 2000 h, resp.
- ST **UV absorber** polymeric; ethylene propylene copolymer compn **UV absorber**
- IT **UV** stabilizers
(polymeric **UV-absorbing** agents and compns. contg. them)
- IT Polyester fibers, uses
Polyesters, uses
Polyoxyphenylenes
RL: POF (Polymer in formulation); USES (Uses)
(polymeric **UV-absorbing** agents and compns. contg. them)
- IT 188753-55-1P 188753-57-3P
RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); PRP (Properties); **PREP (Preparation)**; USES (Uses)
(polymeric **UV-absorbing** agents and compns. contg. them)
- IT 9002-86-2, Polyvinyl chloride 9010-79-1, Ethylene-propylene copolymer
RL: POF (Polymer in formulation); USES (Uses)
(polymeric **UV-absorbing** agents and compns. contg. them)
- IT 188753-55-1P
RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive use); PRP (Properties); **PREP (Preparation)**; USES (Uses)
(polymeric **UV-absorbing** agents and compns. contg. them)
- RN 188753-55-1 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

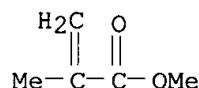
CM 1

CRN 138968-34-0
CMF C31 H31 N3 O4



CM 2

CRN 80-62-6
CMF C5 H8 O2



L17 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:230817 HCAPLUS
DN 126:216706
TI Manufacture of **ultraviolet absorbing** lenses using
polymerizable triazine compounds
IN Nakahara, Yutaka; Nanbu, Yoko
PA Asahi Denka Kogyo Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61L027-00
ICS C08F220-36; C08F246-00; G02C007-02
CC 63-7 (Pharmaceuticals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09028785	A2	19970204	JP 1995-203809	19950718
OS	MARPAT 126:216706				
AB	<p>Polymerizable acrylic group-contg. triazines as UV-ray absorbents are copolymd. with monomers to give ophthalmic lenses. The lenses provide superior safety to use and retina protective effects. A blend contg. Me methacrylate 95, ethylene glycol dimethacrylate 5, dimethyl-2,2'-azobis-isobutyrate 0.2, and 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]ethyl methacrylate (I) 5 parts was polymd. and processed to obtain a button shape hard product, which was soaked in polypropylene for 72 h at 50.degree. to show</p>				

no detection of eluted I. The lenses showed 3.2 % of transmissivity of 340 nm ray.

ST **UV absorbent** triazine polyacrylate ophthalmic lens

IT Eyeglass lenses

Intraocular lenses

UV stabilizers

(manuf. of **UV absorbing** lenses using polymerizable triazine compds.)

IT **188066-74-2P 188066-75-3P 188066-76-4P**

188066-77-5P 188066-78-6P

RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

(manuf. of **UV absorbing** lenses using polymerizable triazine compds.)

IT **188066-74-2P**

RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

(manuf. of **UV absorbing** lenses using polymerizable triazine compds.)

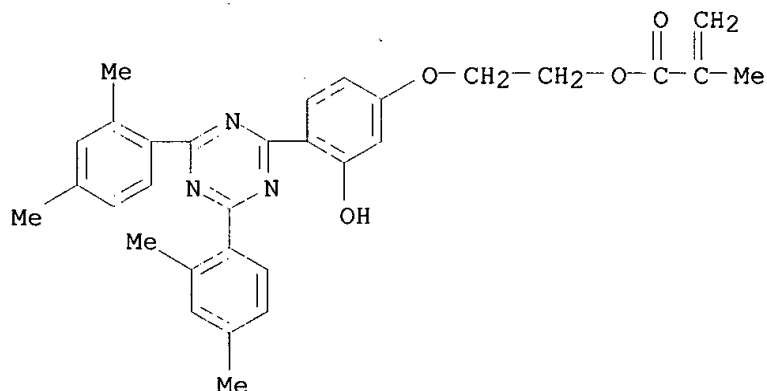
RN 188066-74-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]ethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 138968-34-0

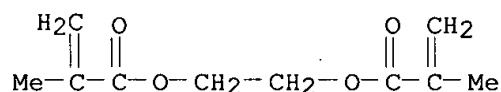
CMF C31 H31 N3 O4



CM 2

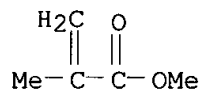
CRN 97-90-5

CMF C10 H14 O4



CM 3

CRN 80-62-6
CMF C5 H8 O2



L17 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:181082 HCAPLUS
DN 126:186113
TI Preparation of triazine derivatives as **UV absorbers**
IN Kimura, Ryoji; Nanbu, Yoko
PA Asahi Denka Kogyo Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07D251-24
ICS C09K003-00
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 35, 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09020760	A2	19970121	JP 1995-192549	19950705
OS	MARPAT 126:186113				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. I [R1 = H, alkyl, etc.; R2 = alkenyl; R3 - R5 = H, alkyl, etc.], useful as **UV absorbers** for polymers and recording materials, are prepd. In a weather resistance test, a film contg. the title compd. II showed good resistance for 3800 h, vs. 2900 h for a ref. compd.

ST triazine prepn **UV absorber**; polymer triazine prepn **UV absorber**; recording material triazine prepn **UV absorber**

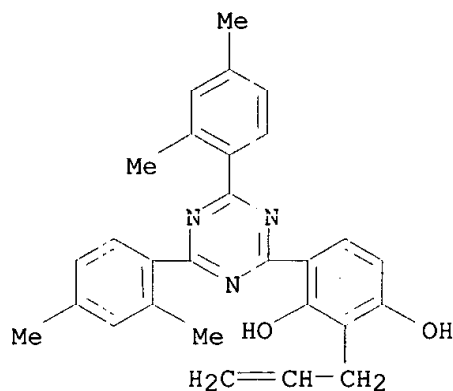
IT Polymers, properties
RL: MSC (Miscellaneous); PRP (Properties)
(prepn. of triazine derivs. as **UV absorbers** for polymers)

IT Recording materials
UV shields
(prepn. of triazine derivs. as **UV absorbers** for polymers and recording materials)

IT 106-95-6, Allyl bromide, reactions 1668-53-7 4784-77-4, Crotyl bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of triazine derivs. as **UV absorbers**)

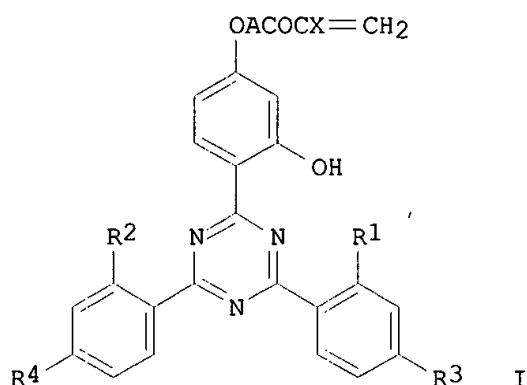
IT 187148-09-0P 187148-10-3P 187148-11-4P
187148-12-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered)

material use); **PREP (Preparation)**; **USES (Uses)**
 (prepn. of triazine derivs. as **UV absorbers**)
 IT **187148-09-0P**
 RL: **SPN (Synthetic preparation)**; **TEM (Technical or engineered material use)**; **PREP (Preparation)**; **USES (Uses)**
 (prepn. of triazine derivs. as **UV absorbers**)
 RN 187148-09-0 HCAPLUS
 CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-2-(2-propenyl)- (9CI) (CA INDEX NAME)



L17 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1996:629802 HCAPLUS
 DN 125:250577
 TI Emulsion coatings containing polymers bearing **ultraviolet light-absorbing** hydroxyphenyltriazine-type groups
 IN Nanbu, Yoko; Kimura, Ryoji; Nakahara, Yutaka
 PA Asahi Denka Kogyo Kk, Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09D133-06
 ICS C08F002-22; C08F212-08; C08F220-36; C09D005-02; C09D125-00
 CC 42-10 (Coatings, Inks, and Related Products)
 FAN.CNT 1

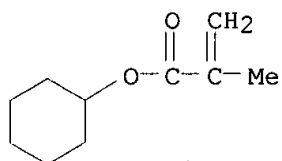
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08193180	A2	19960730	JP 1995-6070	19950118
GI					



- AB Title coatings, showing good resistance to weather for long period, contain emulsion-polymerized compounds of (meth)acrylic phenyltriazine monomers I [X = H, Me; A = direct bond, CH₂CH₂O, CH₂CH(OH)CH₂O; R₁-R₄ = H, C₁-10 alkyl] 0.1-20, cycloalkyl-substituted monomers 5-99.99, and other monomers 0-94.99%. Thus, Bu acrylate 9.0, Me methacrylate 9.8, acrylic acid 1.0, I (X = Me; A = CH₂CH₂O, R₁-R₄ = H) 0.2, cyclohexyl methacrylate 60.0, and tert-butylcyclohexyl methacrylate 20.0 parts were emulsion-polymerized then mixed with TiO₂, water, and other additives, coated on a flexible board and dried at 25.degree. for 1 wk to give a test piece showing 85% retention of initial gloss after 4000 h in a sunshine weatherometer.
- ST **UV absorbent** acrylic polymer coating; emulsion polymer hydroxyphenyltriazine acrylate coating; weather resistant coating UV stable monomer; water resistant coating acrylic polymer; butyl acrylate copolymer coating weatherability; methyl methacrylate copolymer coating weatherability; cyclohexyl methacrylate copolymer coating weatherability; butylcyclohexyl methacrylate copolymer coating
- IT Coating materials
(weather-resistant, emulsion coatings containing polymers bearing **UV light-absorbing** hydroxyphenyltriazine-type groups)
- IT 182207-23-4P 182207-25-6P 182207-27-8P 182207-29-0P
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(emulsion coatings containing polymers bearing **UV light -absorbing** hydroxyphenyltriazine-type groups)
- IT 182207-25-6P
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(emulsion coatings containing polymers bearing **UV light -absorbing** hydroxyphenyltriazine-type groups)
- RN 182207-25-6 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, 2-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]ethyl ester, polymer with butyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, (1,1-dimethylethyl)cyclohexyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

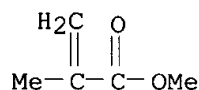
CM 1

CRN 138968-34-0



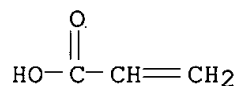
CM 5

CRN 80-62-6
CMF C5 H8 O2



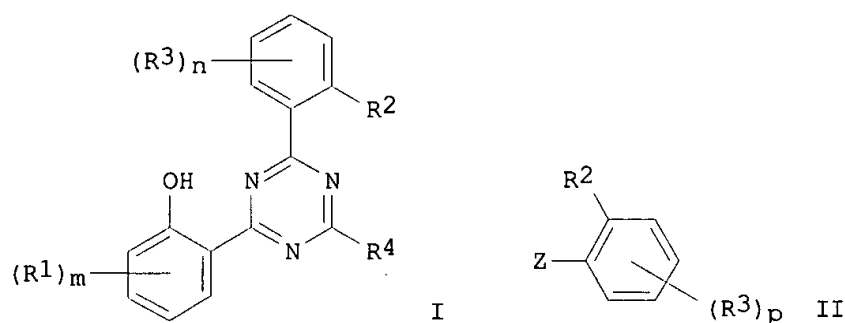
CM 6

CRN 79-10-7
CMF C3 H4 O2



L17 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:546030 HCAPLUS
DN 125:181108
TI Photographic material with polymeric **UV absorber**
IN Hagemann, Joerg; Helling, Guenter; Renner, Guenter
PA Agfa-Gevaert Ag, Germany
SO Ger. Offen., 23 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM G03C007-396
ICS C08L039-04; C08F026-06
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19500441	A1	19960711	DE 1995-19500441	19950110
GI					



AB The title material comprises a support coated with multiple color photog. emulsion layers where .gtoreq.1 layers contains a polymeric **UV absorber** obtained by polymn. of the monomer I [R1, R3 = halogen, OH, mercapto, alkyl, aryl, alkoxy, aryloxy, acyloxy, alkylthio, arylthio, NR5R6, alkoxycarbonyl, carbamoyl, sulfamoyl; R2 = H, OH, halogen, alkyl; R4 = alkyl, alkoxy, alkylthio, aryloxy, II; R5 = H, alkyl, acyl; R6 = H, alkyl, acyl, aryl, alkoxycarbonyl, carbamoyl, sulfamoyl; m, n, p = 1-4; Z = bond] where >1 of R1, R2 and R3 and .gtoreq.1 of R1 and R4 contains ethylenically unsatd. polymerizable group. The material shows less oil building, high extinction coeff. and sweating resistance.

ST color photog emulsion polymeric **UV absorber**

IT **Ultraviolet** radiation
(**absorber**; polymeric)

IT Photographic emulsions
(color, photog. material with polymeric **UV absorber** for improved sweating resistance)

IT 178868-83-2P 180681-66-7P 180681-67-8P 180681-68-9P
180681-69-0P 180681-70-3P 180681-71-4P
RL: DEV (Device component use); MOA (Modifier or additive use); SPN
(**Synthetic preparation**); **PREP (Preparation)**; USES (Uses)
(photog. material with polymeric **UV absorber** for improved sweating resistance)

IT 180681-69-0P
RL: DEV (Device component use); MOA (Modifier or additive use); SPN
(**Synthetic preparation**); **PREP (Preparation)**; USES (Uses)
(photog. material with polymeric **UV absorber** for improved sweating resistance)

RN 180681-69-0 HCAPLUS

CN 2-Propenoic acid, ethyl ester, polymer with N-[2-[2-hydroxy-3-[3-hydroxy-4-[4-(2-hydroxy-3,5-dimethylphenyl)-6-(2-hydroxy-4,6-dimethylphenyl)-1,3,5-triazin-2-yl]phenoxy]propoxy]ethyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 178868-91-2

CMF C33 H36 N4 O7

3-(2-methylpropenoxyloxy)propyl]-2-carbonyloxyethyl)phenyl]benzotriazole, and MA-TZ 1, 2,4-bis(2,4-dimethylphenyl)-6-[2-hydroxy-4-(2-hydroxy-3-[2-methylpropenoxyloxy])propoxyphenyl]-1,3,5-triazine, with styrene, Me methacrylate, and methacrylic acid were synthesized by radical polymn. Their absorption spectra in the long-wavelength UV region appear unchanged compared to those of the monomeric **UV absorbers**, indicating the stabilizer chromophore remains unimpaired in the course of the polymn. Both the monomeric and the polymeric stabilizers exhibit a strongly Stokes-shifted, temp.-dependent, low-quantum-yield fluorescence which arises from an intermediate species formed by intramol. proton transfer. The intramol. hydrogen bond which is low-quantum-yield fluorescence which arises from an intermediate species formed by intramol. proton transfer. essential for the photostability of this type of **UV absorbers** thus is still intact in the copolymers.

Activation energies for the radiationless deactivation process can be evaluated from the temp. dependence of the proton-transferred fluorescence. These energies lie between 4 and 5 kJ/mol for most of the benzotriazole and triazine stabilizers investigated and show hardly any matrix dependence. Fluorescence-decay measurements with cryst. MA-TIN 1 at different temps. reveal a close correspondence of the temp. dependence between decay times and relative quantum yields. The radiationless process thence is concluded to originate from the proton-transferred level S1'. The decay time at room temp. is estd. at 70 ps, close to the value for cryst. TIN P (Tinuvin P). The proton-transferred fluorescence of MA-TIN 1, in contrast, exhibits a biexponential decay profile.

ST polymeric **UV absorber** prepn property; light stabilizer
benzotriazole triazine polymer

IT Light stabilizers

(UV, polymeric benzotriazoles and triazines; investigations on polymeric and monomeric intramolecularly hydrogen-bridged **UV absorbers** of benzotriazole and triazine class)

IT Polymerization

(radical, of styrene and acrylic monomers with benzotriazole and triazine derivs.)

IT 135590-53-3 136902-10-8

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(absorption and fluorescence spectra and polymn. of)

IT 179693-99-3P 179694-00-9P 179694-01-0P 179694-02-1P
179694-03-2P 179694-04-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(investigations on polymeric and monomeric intramolecularly hydrogen-bridged **UV absorbers** of benzotriazole and triazine class)

IT 103734-29-8 106556-36-9 154825-53-3 179693-98-2

RL: PRP (Properties)
(temp. dependence and substituent effects on proton-transferred fluorescence of)

IT 74734-21-7 84268-33-7

RL: PRP (Properties)
(temp. dependence of proton-transferred fluorescence of)

IT 179693-99-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(investigations on polymeric and monomeric intramolecularly hydrogen-bridged **UV absorbers** of benzotriazole and triazine class)

RN 179693-99-3 HCAPLUS

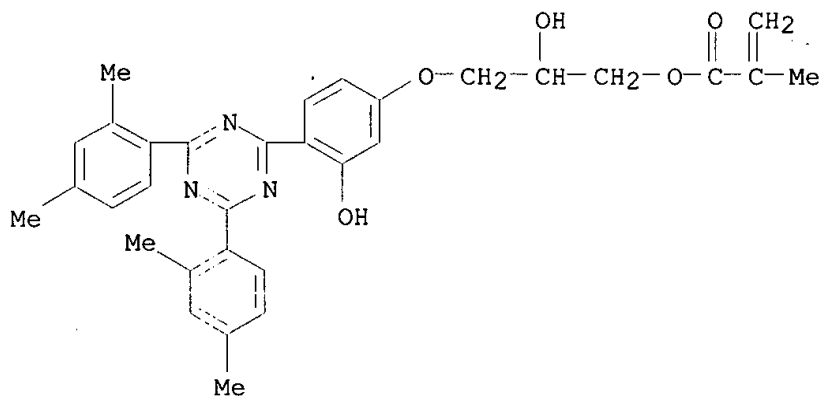
CN 2-Propenoic acid, 2-methyl-, 3-[4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-2-hydroxypropyl ester, polymer with

ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 136902-10-8

CMF C32 H33 N3 O5



CM 2

CRN 100-42-5

CMF C8 H8

 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$

L17 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:359355 HCAPLUS

DN 125:34339

TI Manufacture of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers

IN Toan, Vien Van; Leppard, David George; Rytz, Gerhard; Wuerms, Norbert; Hayoz, Pascal

PA Ciba-Geigy A.-G., Switz.

SO Ger. Offen., 56 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07D251-24

ICS C09K015-30; C09K015-32; C09D007-12; C08G085-00; C08F026-06; C08F008-30; C08K005-3492

ICA C08G063-685; C08G063-19; C08G063-66; C08G069-48; C08G018-38; C08G018-62; C08G018-83; C08G064-00; C08G064-42; C08G059-14; C08G008-28; C08G012-40

CC 35-2 (Chemistry of Synthetic High Polymers)

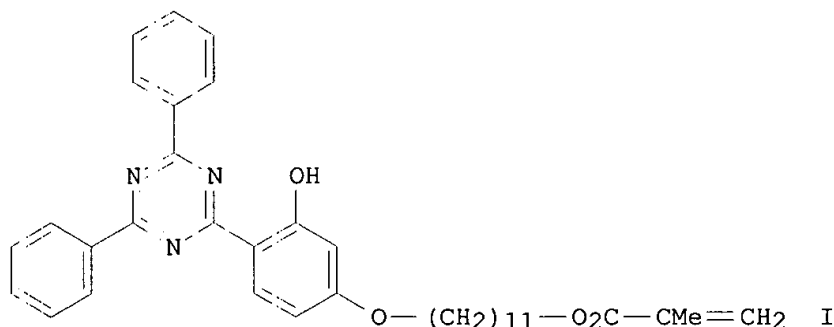
Section cross-reference(s): 28

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19536730	A1	19960411	DE 1995-19536730	19951002
	TW 413677	B	20001201	TW 1995-84110075	19950925
	CH 692200	A	20020315	CH 1995-2733	19950927

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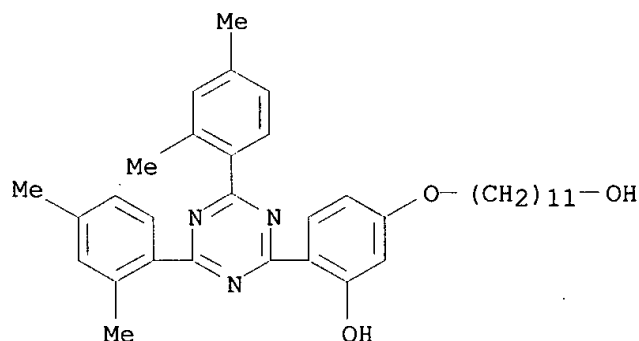
US 5672704	A	19970930	US 1995-535406	19950928
CA 2159694	AA	19960405	CA 1995-2159694	19951002
GB 2293823	A1	19960410	GB 1995-20046	19951002
GB 2293823	B2	19970122		
FR 2725204	A1	19960405	FR 1995-11598	19951003
FR 2725204	B1	19970606		
AU 9533049	A1	19960418	AU 1995-33049	19951003
AU 698297	B2	19981029		
AT 9501636	A	19990115	AT 1995-1636	19951003
AT 405515	B	19990927		
NL 1001338	A1	19960404	NL 1995-1001338	19951004
NL 1001338	C2	19960412		
BE 1008871	A5	19960806	BE 1995-822	19951004
CN 1130625	A	19960911	CN 1995-117220	19951004
CN 1070186	B	20010829		
BR 9504276	A	19961001	BR 1995-4276	19951004
JP 08259545	A2	19961008	JP 1995-282618	19951004
ES 2106684	A1	19971101	ES 1995-1914	19951004
ES 2106684	B1	19980701		
CN 1132747	A	19961009	CN 1995-117962	19951010
CN 1067994	B	20010704		
US 5869588	A	19990209	US 1997-865148	19970529
PRAI CH 1994-2989	A	19941004		
CH 1994-3039	A	19941010		
CH 1995-364	A	19950208		
US 1995-535406	A3	19950928		
OS MARPAT 125:34339				
GI				



- AB (2-Hydroxyphenyl)triazines of specified structure were manufd. as additives or comonomers for manuf. of polymeric materials with improved resistance to light-, O- and/or heat-induced degrdn. For example, film of Me methacrylate polymer contg. 1% (hydroxyphenyl)triazine comonomer (I) [prepn. by partial etherification of 2-(2,4-dihydroxyphenyl)-4,6-diphenyl-1,3,5-triazine with 11-bromo-1-undecanol and esterification of the product with methacryloyl chloride given] showed no discoloration in **yellowness** index test.
- ST hydroxyphenyltriazine manuf **UV absorber**;
bromoundecanol etherification dihydroxyphenyldiphenyltriazine **UV absorber** manuf; methacryloyl chloride esterification
hydroxyundecyloxyphenyldiphenyltriazine **UV absorber**;
PMMA **yellowness** prevention hydroxyphenyltriazine deriv manuf
- IT Light stabilizers
(UV, manuf. of novel (2-hydroxyphenyl)triazines as **UV-**

- absorbers** and polymer stabilizers)
- IT Discoloration prevention
(**yellowing**, agents, manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 108-77-0, Cyanuric chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction with 2-bromomesitylene; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 576-83-0, 2-Bromomesitylene
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction with cyanuric chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 108-46-3, Resorcinol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(arylation with 2-mesityl-4,6-dichloro-1,3,5-triazine; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification with (hydroxyphenyl)triazine derivs.; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 2125-28-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification with (meth)acryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 122897-08-9 148898-74-2 177605-84-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification with acryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 177605-90-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification with methacryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 111-25-1, 1-Bromohexane 1592-20-7, p-Vinylbenzyl chloride 39833-65-3, m-Vinylbenzyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification with (dihydroxyphenyl)triazine deriv.; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 1611-56-9, 11-Bromo-1-undecanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification with (hydroxyphenyl)triazine derivs.; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 1668-53-7 2125-23-7 2125-25-9 38369-95-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification with 11-bromo-1-undecanol; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 176225-62-0P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and arylation of resorcinol; manuf. of novel

- (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 176225-58-4P 176225-59-5P 176225-60-8P 176225-63-1P
176225-65-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and esterification with (meth)acryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 177605-92-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and esterification with methacryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 138968-34-0P 176225-18-6P 176225-19-7P 176225-20-0P
176225-21-1P 176225-22-2P 176225-25-5P 176225-26-6P 176225-27-7P
176225-28-8P 176225-29-9P 176225-30-2P 176225-31-3P 176225-32-4P
176225-33-5P 176225-34-6P 176225-35-7P 176225-36-8P
176225-37-9P 176225-38-0P 176225-39-1P
176225-40-4P 176225-41-5P 176225-42-6P
176225-43-7P 176225-44-8P 176225-45-9P 176225-46-0P
176225-47-1P 176225-48-2P 176225-49-3P
176225-50-6P 176225-51-7P 176225-52-8P 176225-53-9P
176225-54-0P 176225-55-1P 176225-56-2P 176225-57-3P
177605-85-5P 177605-86-6P 177605-87-7P 177605-88-8P
177605-89-9P 177605-91-3P 177605-93-5P 177605-94-6P
177605-95-7P 177605-96-8P 177795-56-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- IT 176225-59-5P
RL: IMF (Industrial manufacture); PREP (Preparation); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and esterification with (meth)acryloyl chloride; manuf. of novel (2-hydroxyphenyl)triazines as **UV-absorbers** and polymer stabilizers)
- RN 176225-59-5 HCAPLUS
CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-[(11-hydroxyundecyl)oxy]- (9CI) (CA INDEX NAME)



L17 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:318335 HCAPLUS
DN 125:12474

TI Tris-aryl-s-triazine light stabilizers for polymer substrates
 IN Stevenson, Tyler Arthur; Ravichandran, Ramanathan; Holt, Mark Stephen;
 Phan, Thuy Ngoc; Birbaum, Jean-Luc; Toan, Vien Van
 PA Ciba-Geigy A.-G., Switz.
 SO Can. Pat. Appl., 95 pp.
 CODEN: CPXXEB
 DT Patent
 LA English
 IC ICM C07D251-24
 ICS C07D401-14; C07D403-14; C07D405-14; C07D413-14; C07F009-547;
 C09K015-30
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 28, 40, 42

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2154626	AA	19960128	CA 1995-2154626	19950725
	US 5556973	A	19960917	US 1994-281381	19940727
	US 5543518	A	19960806	US 1995-463140	19950602
	US 5637706	A	19970610	US 1995-463572	19950602
	EP 704437	A2	19960403	EP 1995-810471	19950718
	EP 704437	A3	19961023		
	EP 704437	B1	20020925		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
	BR 9503460	A	19960227	BR 1995-3460	19950726
	JP 08053427	A2	19960227	JP 1995-211088	19950727
PRAI	US 1994-281381	A	19940727		

OS MARPAT 125:12474

AB Tris-aryl-s-triazines contg. 1-3 resorcinol derived moieties with
 .gtoreq.1 of the moieties substituted at the 5-position with an alkyl,
 phenylalkyl, halogen, thio or sulfonyl group have UV spectra which are
 red-shifted to the near UV range (360-400 nm) and provide excellent
 stabilization against the deleterious effects of actinic light. Thus,
 adding 37.9 mmol .alpha.-methylstyrene (I) dropwise to 37.8 mmol
 2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-s-triazine and heating
 at 175.degree. to a total of 6 equiv. I and worked up to give a product
 with m.p. 168-170.degree.. Thermoset acrylic clear coats, polycarbonate,
 and polypropylene fiber may be tested with similar stabilizers.

ST alkylresorcinol triazine manuf light stabilizer; phenylalkylresorcinol
 triazine manuf light stabilizer; haloresorcinol triazine manuf light
 stabilizer; thioresorcinol triazine manuf light stabilizer;
 sulfonylresorcinol triazine manuf light stabilizer; polymer actinic light
 stabilizer triazine deriv

IT Coating materials

(acrylic melamine; tris-aryl-resorcinol-s-triazine **light**
 stabilizers with good **absorbance** in near **UV** range
 for polymer substrates)

IT Light stabilizers

(tris-aryl-resorcinol-s-triazine **light** stabilizers with good
absorbance in near **UV** range for polymer substrates)

IT Polypropene fibers, uses

RL: POF (Polymer in formulation); USES (Uses)
 (tris-aryl-resorcinol-s-triazine **light** stabilizers with good
absorbance in near **UV** range for polymer substrates)

IT 9003-07-0, Polypropylene

RL: POF (Polymer in formulation); USES (Uses)
 (fiber; tris-aryl-resorcinol-s-triazine **light** stabilizers
 with good **absorbance** in near **UV** range for polymer
 substrates)

IT 176843-39-3P

- RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate UV stabilizer; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 2725-22-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with diethoxymethane; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 1668-53-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with diisobutylene; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 1237-53-2 1700-02-3, 2,4-Dichloro-6-phenyl-s-triazine 3842-55-5 21902-34-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with hexylresorcinol; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 74-88-4, Methyl iodide, reactions 78-81-9, Isobutylamine 79-03-8, Propionyl chloride 98-83-9, .alpha.-Methylstyrene, reactions 98-88-4, Benzoyl chloride 108-98-5, Thiophenol, reactions 111-25-1, 1-Bromohexane 111-83-1, 1-Bromooctane 122-60-1, 1,2-Epoxy-3-phenoxypropane 638-45-9, 1-Iodohexane 2426-08-6, Butyl glycidyl ether 2896-60-8, 4-Ethylresorcinol 3748-13-8, 1,3-Diisopropenylbenzene 25167-70-8, Diisobutylene
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with hydroxyphenyl-s-triazine deriv.; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 95-88-5, 4-Chlororesorcinol 136-77-6, 4-Hexylresorcinol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with triazine deriv.; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 38369-95-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with .alpha.-methylstyrene; tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 176843-40-6P 176843-41-7DP, glycidyl ethers
176843-42-8P 176843-43-9P 176843-44-0DP, glycidyl ethers 176843-44-0P 176843-45-1P
176843-46-2P 176843-47-3P 176843-48-4P 176843-49-5P
176843-50-8P 176843-51-9P 176843-52-0P
176843-53-1P 176843-54-2P 176843-55-3P
176843-58-6P 176843-59-7P 176843-60-0P 176843-61-1P
176843-62-2P 176843-64-4P 176843-65-5P 176843-66-6P
176843-68-8P 176843-69-9P 176843-70-2P 176843-71-3P
176843-72-4P 176843-73-5P 176843-74-6P
176843-75-7P 176843-76-8P 176843-77-9P
176843-78-0P 176843-79-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(tris-aryl-resorcinol-s-triazine light stabilizers with good absorbance in near UV range for polymer substrates)
- IT 176843-56-4P 176843-57-5P 176843-63-3P 176843-67-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

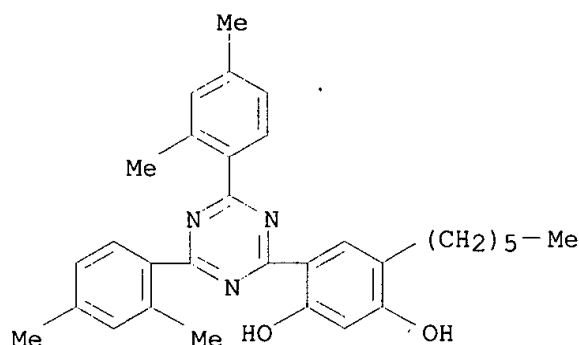
(tris-aryl-resorcinol-s-triazine **light** stabilizers with good **absorbance** in near **UV** range for polymer substrates)

IT 24936-68-3, Lexan 141 111N, uses
 RL: POF (Polymer in formulation); USES (Uses)
 (tris-aryl-resorcinol-s-triazine **light** stabilizers with good **absorbance** in near **UV** range for polymer substrates)

IT 176843-39-3P
 RL: IMF (Industrial manufacture); PREP (Preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (intermediate UV stabilizer; tris-aryl-resorcinol-s-triazine **light** stabilizers with good **absorbance** in near **UV** range for polymer substrates)

RN 176843-39-3 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-6-hexyl- (9CI) (CA INDEX NAME)



L17 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:280633 HCAPLUS

DN 124:328374

TI Photographic recording material containing an **UV-absorber**

IN Toan, Vien Van; Leppard, David George; Rytz, Gerhard; Wuerms, Norbert; Hayoz, Pascal

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 108 pp.
 CODEN: EPXXDW

DT Patent

LA German

IC ICM G03C001-815

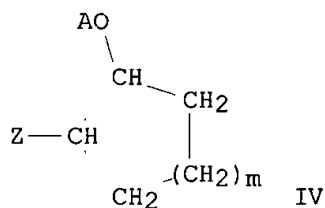
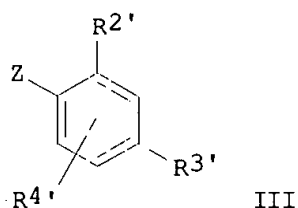
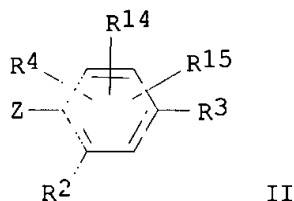
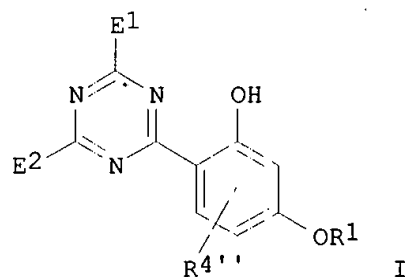
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 706083	A1	19960410	EP 1995-810602	19950927
	R: DE, FR, GB, IT, NL				
	CN 1132862	A	19961009	CN 1995-119152	19950929
	US 5538840	A	19960723	US 1995-538090	19951002
	AU 9533048	A1	19960418	AU 1995-33048	19951003
	AU 703602	B2	19990325		
	AU 9533047	A1	19960426	AU 1995-33047	19951003
	AU 703967	B2	19990401		
	JP 08234364	A2	19960913	JP 1995-291596	19951003

GB 2294043	A1	19960417	GB 1995-20261	19951004
GB 2294043	B2	19980930		
BR 9504278	A	19961008	BR 1995-4278	19951004
US 5686233	A	19971111	US 1995-539150	19951004
CA 2160091	AA	19960411	CA 1995-2160091	19951006
DE 19537291	A1	19960418	DE 1995-19537291	19951006
ES 2106685	A1	19971101	ES 1995-1940	19951006
ES 2106685	B1	19980701		
NL 1001381	A1	19960410	NL 1995-1001381	19951009
NL 1001381	C2	19960412		
FR 2725444	A1	19960412	FR 1995-11850	19951009
FR 2725444	B1	19970131		
JP 08239368	A2	19960917	JP 1995-297920	19951009
AT 9501667	A	19990715	AT 1995-1667	19951009
AT 406161	B	20000327		
BR 9504359	A	19961008	BR 1995-4359	19951010
CN 1132747	A	19961009	CN 1995-117962	19951010
CN 1067994	B	20010704		
BE 1009090	A3	19961105	BE 1995-834	19951010
US 5869588	A	19990209	US 1997-865148	19970529
PRAI CH 1994-2988	A	19941004		
CH 1994-3039	A	19941010		
CH 1995-364	A	19950208		
CH 1995-365	A	19950208		
CH 1994-2989	A	19941004		
US 1995-535406	A3	19950928		

GI



AB The title material comprises an **UV-absorber** from a polymer contg. the monomer I [E1, E2 = II, III; R1 = A, CH2CH(XA)-CH2-O-R7, CR8R8'(CH2)1XA, CH2-CH(OA)R9, CH2-CH(OH)CH2XA, IV etc.; R2 = H, alkyl, cycloalkyl, alkenyl, halogen, Ph, trifluoromethyl; R2' = alkoxy, alkenoxy, CO2R12, OH, OA; R3, R3' = H, OH, OR1, OR131, etc.; R4, R4', R4'' = H, alkyl, alkenyl, OR131, halogen, etc.; R5 = H,

CH2CO2R13, alkyl, CN; R6 = H, CO2R13, alkyl, Ph; R7 = alkyl, cycloalkyl, alkenyl, Ph, etc.; R8, R8' = H, alkyl, etc.; R9 = alkyl, Ph, phenylalkyl; R10 = H, Me; R11, R11' = alkyl, Ph (optionally substituted); R12 = H, alkyl, Ph, alkoxy etc.; R13 = alkyl, alkenyl, cycloalkyl, Ph etc.; R14, R15 = H, alkyl, alkenyl, cycloalkyl, halogen, trifluoromethyl, Ph, phenylalkyl, CN, alkylsulfonyl, phenylsulfonyl, OR131; R131 = alkyl, alkenyl, alkoxy, Ph etc.; R132, R133 = alkyl, alkoxyalkyl, dialkylaminoalkyl, cycloalkyl or R132 and R133 together = alkylene, oxaalkylene, azaalkylene; X = NR8, O, NH(CnH2n)NH, O(CkH2k)NH; k = 2-4; l = 0-19; m = 2-8; n = 0-4; p = 0-10; q = 1-8; r = 0-18; t = 0-2].

ST photoq film UV absorber triazine polymer

IT Photographic films

(color, polymeric UV-absorber)

IT 176225-58-4P 176225-59-5P 176225-60-8P 176225-61-9P

176225-62-0P 176225-63-1P 176225-64-2P 176225-65-3P

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RL: RCT (Reactant): SPN (Synthetic preparation): PREP

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(Preparation); RACT (Reactant or reagent)

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separation// and (Reactant or reagent)
(intermediate for monomer for polymeric UV-absorber

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for photog. film)

IT 138968-34-0P 176225-18-6P 176225-19-7P 176225-20-0P

176225-21-1P 176225-22-2P 176225-23-3P 176225-24-4P 176225-25-5P

176225-26-6P 176225-27-7P 176225-28-8P 176225-29-9P 176225-30-2P

176225-31-3P 176225-32-4P 176225-33-5P 176225-34-6P 176225-35-7P

176225-36-8P 176225-37-9P 176225-38-0P

176225-39-1P 176225-40-4P 176225-41-5P

176225-42-6P 176225-43-7P 176225-44-8P

176329-34-3P 176329-36-5P 176393-20-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(monomer for polymeric **UV-absorber** for photoq.

film)

IT 176225-45-9P 176225-46-0P 176225-47-1P 176225-48-2P

176225-49-3P 176225-50-6P 176225-51-7P 176225-52-8P

176225-53-9P 176225-54-0P 176225-55-1P 176225-56-2P

176225-57-3P 176329-35-4P 176329-37-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(polymeric UV-absorber for photog. film)

IT 176225-59-5P

RL: SPN (Synthetic preparation); PREP (Preparation);

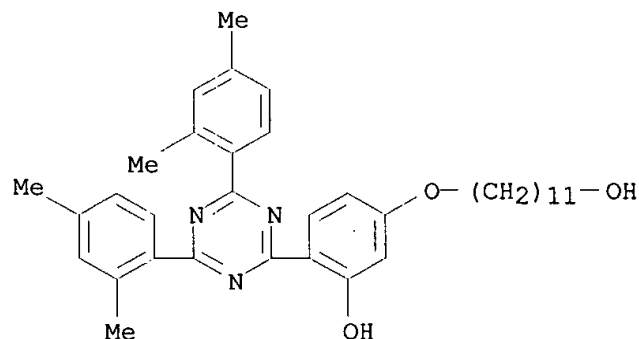
PREP (Preparation); RACT (Reactant or reagent)

(intermediate for monomer for polymeric UV-absorber

for photog. film)

RN 176225-59-5 HCAPLUS

CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-[(11-hydroxyundecyl)oxy]- (9CI) (CA INDEX NAME)



L17 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1996:228491 HCAPLUS
 DN 124:289580
 TI Preparation of triazole and 2,4-dihydroxybenzophenone derivatives having ultra-violet absorption properties
 IN Bacher, Jean-Pierre; Kaufmann, Werner; Reinehr, Dieter
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 38 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C07D251-24
 ICS D06M013-00; C07D405-12; C07D251-70; C07D251-44; C07D251-50;
 C07D403-12; C07D403-14; C07D251-42
 CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 693483	A1	19960124	EP 1995-810388	19950612
	EP 693483	B1	20020410		
	R: BE, CH, DE, FR, GB, IT, LI				
	US 5741905	A	19980421	US 1995-471816	19950606
	EP 1170290	A2	20020109	EP 2001-123273	19950612
	R: BE, CH, DE, FR, GB, IT, LI				
	AU 9523229	A1	19960208	AU 1995-23229	19950621
	AU 697798	B2	19981015		
	ZA 9505166	A	19960123	ZA 1995-5166	19950622
	JP 08041003	A2	19960213	JP 1995-157769	19950623
	GB 2291644	A1	19960131	GB 1995-14407	19950714
	GB 2291644	B2	19980902		
	US 6045586	A	20000404	US 1998-9864	19980122
PRAI	GB 1994-14881	A	19940723		
	GB 1994-17562	A	19940901		
	US 1995-471816	A3	19950606		
	EP 1995-810388	A3	19950612		
OS	MARPAT 124:289580				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. A(B-D)_m [m = 1, 2; A = Q (wherein R = PhCO, benzotriazol-2-yl), Q1, Q2, Q3; R1 = Q (wherein R = (un)substituted Ph), glycidyloxy, OCH₂CONHCH₂OH, OCH₂CON(CH₂OH)₂; X = F, Cl, NHCH₂OH; X1 = F, Cl, NHCH₂OH, Q4; wherein B = O, NH, SO₂; R2 = alkoxycarbonyl, alkanoyl, SO₃M, SO₂CH₂CH₂OSO₃M, etc.; M = H, Na, K, Ca, Mg, NH₄, mono-, di-, tri-, or tetraalkylammonium that is di- or tri-substituted by a mixt. of C1-4 alkyl and C1-4 hydroxyalkyl group, or when A is a residue of formula Q1 or Q2; D = glycidyl, CH₂CONHCH₂OH, CH₂CON(CH₂OH)₂, or CH₂CH₂OSO₃M, or when A = Q1 or Q2, D = Q4 (wherein R2 = alkoxycarbonyl, SO₃M, SO₂CH₂CH₂OSO₃M), Q5 (wherein n = 0,1), Q6 (wherein X, X1, M = same as above)], which are useful as **UV absorbing** agents and to a method of improving the sun protection of textile fiber material, are prepd. Thus, 13.1 g 2-(2,4-dihydroxyphenyl)-4,6-diphenyl-1,3,5-triazine was stirred with 7.3 g K₂CO₃ and 100 mL epichlorohydrin over 5 h at 110.degree. to give, after workup, the title compd. (I) in 88.1% yield. A bleached

cotton cretonne was treated with an aq. soln. contg. 2 g/L 40% AcOH and 250 g/L I, dried, and thermofixed at 170.degree. to give a fabric with sun protection factor (SPF) 41.

ST triazole prepn **ultra violet absorber**;
hydroxybenzophenone prepn **ultra violet absorber**; textile fiber sun protection

IT Light stabilizers
Textiles

(prepn. of triazole and dihydroxybenzophenone derivs. as **ultra -violet absorbers** for sun protection of textiles)

IT 26464-76-6P **138968-60-2P** 140613-28-1P 175391-13-6P
175391-14-7P 175391-15-8P 175391-16-9P 175391-17-0P 175391-18-1P
175391-19-2P 175391-20-5P 175391-21-6P 175391-22-7P 175391-23-8P
175391-24-9P 175391-25-0P 175391-26-1P 175391-27-2P 175391-28-3P
175391-29-4P 175391-30-7P 175391-31-8P 175391-32-9P 175391-33-0P
175391-34-1P 175391-35-2P 175391-36-3P 175391-37-4P 175391-38-5P
175391-39-6P 175391-40-9P

RL: MOA (Modifier or additive use); **SPN (Synthetic preparation)**;
PREP (Preparation); **USES (Uses)**

(prepn. of triazole and dihydroxybenzophenone derivs. as **ultra -violet absorbers** for sun protection of textiles)

IT 50-00-0, Formaldehyde, reactions 79-07-2, Chloroacetamide 94-09-7,
Ethyl 4-aminobenzoate 99-92-3 106-89-8, reactions 108-77-0, Cyanuric
chloride 109-12-6, 2-Aminopyrimidine 121-57-3 131-56-6,
2,4-Dihydroxybenzophenone 591-54-8, 4-Aminopyrimidine 1668-53-7
2494-89-5, 2-(4-Aminophenylsulfonyl)ethyl hydrogen sulfate 7336-20-1,
Disodium 4,4'-diaminostilbene-2,2'-disulfonate 26858-65-1 38369-95-8
41427-13-8, Sodium 4-aminostilbene-2-sulfonate 164352-19-6 175391-41-0
175391-42-1, Disodium 4-aminostilbene-2,2'-disulfonate

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of triazole and dihydroxybenzophenone derivs. as **ultra -violet absorbers** for sun protection of textiles)

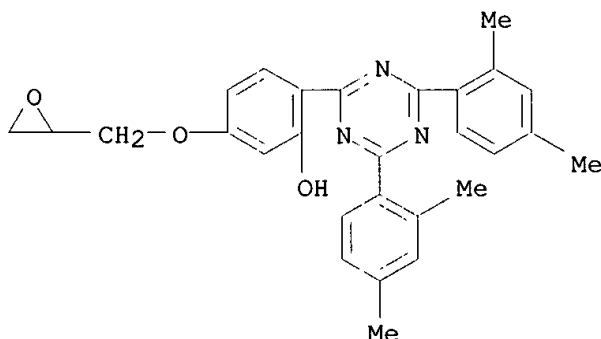
IT **138968-60-2P**

RL: MOA (Modifier or additive use); **SPN (Synthetic preparation)**;
PREP (Preparation); **USES (Uses)**

(prepn. of triazole and dihydroxybenzophenone derivs. as **ultra -violet absorbers** for sun protection of textiles)

RN 138968-60-2 HCAPLUS

CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-
(oxiranylmethoxy)- (9CI) (CA INDEX NAME)



L17 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:513532 HCAPLUS
DN 122:242398

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

TI Aminoplast-bonded light stabilizers with low volatility
 IN Szita, Jeno G.; Waterman, Paul S.
 PA American Cyanamid Co., USA
 SO Eur. Pat. Appl., 77 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C07D487-04
 ICS C07D403-12; C07D251-70; C07D251-18; C07D249-20; C08K005-34;
 C08K005-3447; C08K005-3475; C08K005-3492
 ICI C07D487-04, C07D235-00
 CC 42-5 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 604980	A1	19940706	EP 1993-121013	19931228
	R: DE, ES, FR, GB, IT, NL				
	US 5621052	A	19970415	US 1992-998099	19921229
	CA 2112439	AA	19940630	CA 1993-2112439	19931224
	JP 06263965	A2	19940920	JP 1993-349252	19931228
	US 5547753	A	19960820	US 1995-449401	19950523
	US 5563224	A	19961008	US 1995-448291	19950523
	US 5605986	A	19970225	US 1995-447668	19950523
	US 5612084	A	19970318	US 1995-448161	19950523
PRAI	US 1992-998099		19921229		
AB	Light stabilizers with low volatility and good compatibility with coating resins (e.g., acrylic-melamine) are prepd. by reacting alkoxymethylated aminoplasts (e.g., alkoxymethylated derivs. of glycoluril, melamine, and/or benzoguanamine) with light stabilizers [e.g., 2-(2-hydroxyaryl)benzotriazoles, 2-hydroxybenzophenones, 2-(2-hydroxyaryl)-4,6-diaryl-1,3,5-triazines, salicylic acid derivs., and/or 2-hydroxyoxanilides] in the presence of H2SO4. A light stabilizer was prepd. by reacting 8.0 g Powderlink 1174 with 32.2 g Cyasorb UV 5411 in 90 mL H2SO4.				
ST	aminoplast light stabilizer adduct nonvolatile; UV absorber aminoplast adduct nonvolatile; phenol light stabilizer aminoplast adduct; benzotriazole light stabilizer aminoplast adduct; benzophenone light stabilizer aminoplast adduct; triazine light stabilizer aminoplast adduct; melamine resin light stabilizer adduct; glycoluril aminoplast light stabilizer adduct				
IT	Phenols, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses) (reaction products with aminoplasts, light stabilizers; prepn. and use of nonvolatile)				
IT	Light stabilizers (reaction products with aminoplasts; prepn. and use of nonvolatile)				
IT	Aminoplasts RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses) (reaction products with light stabilizers; prepn. and use of nonvolatile)				
IT	Coating materials (weather-resistant, acrylic-melamine resin; nonvolatile aminoplast-light stabilizer adducts for use in)				
IT	69-72-7DP, Salicylic acid, reaction products with aminoplasts 1843-05-6DP, Cyasorb UV 531, reaction products with aminoplasts 2725-22-6DP, Cyasorb UV 1164L, reaction products with aminoplasts 3147-75-9DP, Cyasorb UV 5411, reaction products with aminoplasts				

9003-08-1DP, Cymel 300, reaction products with light stabilizers
 17464-88-9DP, Powderlink 1174, reaction products with light stabilizers
 66810-89-7DP, Cymel 1123, reaction products with light stabilizers
 82493-14-9DP, reaction products with aminoplasts 95567-18-3DP, Cymel
 1171, reaction products with light stabilizers

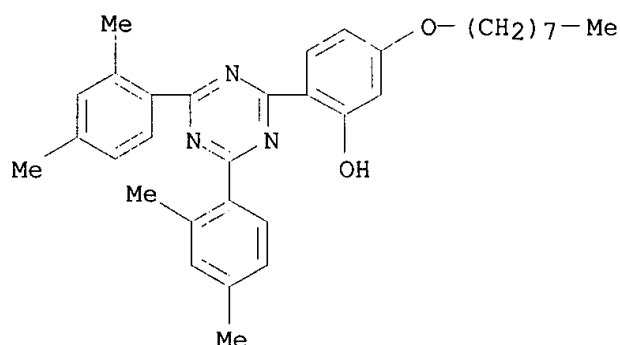
RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive
 use); PRP (Properties); **PREP (Preparation)**; USES (Uses)
 (light stabilizers; prepn. and use of nonvolatile)

IT 2725-22-6DP, Cyasorb UV 1164L, reaction products with aminoplasts

RL: **IMF (Industrial manufacture)**; MOA (Modifier or additive
 use); PRP (Properties); **PREP (Preparation)**; USES (Uses)
 (light stabilizers; prepn. and use of nonvolatile)

RN 2725-22-6 HCAPLUS

CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(octyloxy)-
 (9CI) (CA INDEX NAME)



L17 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:558809 HCAPLUS

DN 121:158809

TI Imino ethers as light stabilizers

IN Avar, Lajos

PA Sandoz-Patent-G.m.b.H., Germany

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07D249-20

ICS C07D251-24; C07D211-44; C08K005-34; C09K015-22; C09K015-30;
 C09D007-12

ICA C07C217-00; C07C217-78; C08K005-3435; C08K005-3475; C08K005-3492

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4324793	A1	19940203	DE 1993-4324793	19930723
	FR 2694291	A1	19940204	FR 1993-9207	19930723
	FR 2694291	B1	19960223		
	GB 2269173	A1	19940202	GB 1993-15540	19930726
	GB 2269173	B2	19960221		
	CH 687079	A	19960913	CH 1993-2253	19930726
	US 5489632	A	19960206	US 1993-98975	19930728
	JP 06220005	A2	19940809	JP 1993-188480	19930729
PRAI	GB 1992-16191		19920730		

OS MARPAT 121:158809

AB Imino ethers $ZN:C(OX)nY$ ($n = 1-3$; when $n = 1$, $Z = \text{alkyl, biphenyl, Ph, alkylphenyl, alkoxyphenyl}$; when $n = 2$, $Z = \text{alkylene, alkylphenylene, halophenylene, etc.}$; when $n = 3$, $Z = \text{trivalent aliph. or arom. group}$; $Y = \text{alkyl, Ph, biphenyl, 2-thienyl, etc.}$; $X = \text{substituted benzoylhydroxyphenyl, benzotriazolylhydroxyphenyl, triazinylhydroxyphenyl, or piperidinyl group}$) are prepd. and used as light stabilizers. Reacting 2,4-dihydroxy-4-chlorobenzophenone with $Me_3C-p-C_6H_4C(R):N-p-C_6H_4Ph$ (I) ($R = Cl$) gave I [$R = 4-(4\text{-chlorobenzoyl})-3\text{-hydroxyphenoxy}$] which was used in lacquers based on acrylic and melamine resins to provide resistance to UV light and weathering.

ST imino ether phenol light stabilizer; benzophenone imino ether light stabilizer; benzotriazole imino ether light stabilizer; triazine imino ether light stabilizer; piperidine imino ether light stabilizer; acrylic melamine resin light stabilizer; **UV absorber** imino ether phenol

IT Coating materials
(acrylic-melamine, light stabilizers for, imino ether derivs. as)

IT Imines
RL: PREP (Preparation)
(ether-, prepn. and use as light stabilizers)

IT Light stabilizers
(imino ether derivs., prepn. and use of)

IT Phenols, preparation
RL: PREP (Preparation)
(prepn. and use as light stabilizers)

IT Amines, preparation
RL: PREP (Preparation)
(hindered, prepn. and use as light stabilizers)

IT Ethers, preparation
RL: PREP (Preparation)
(imino, prepn. and use as light stabilizers)

IT 18239-10-6, 4'-Chloro-2,4-dihydroxybenzophenone
RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification of, with (biphenylylimino)(tert-butylphenyl)methyl chloride)

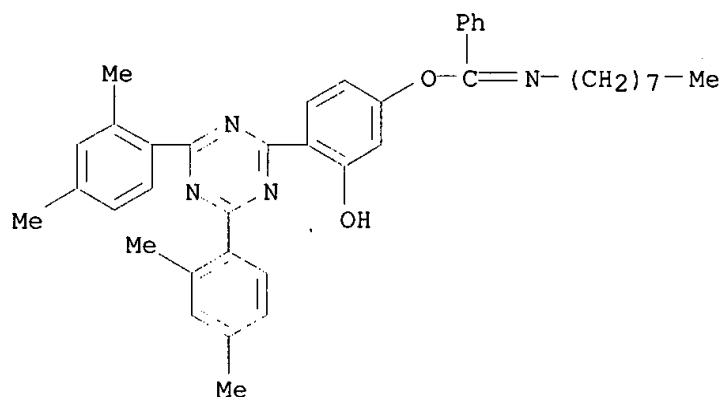
IT 157550-38-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification of, with (chlorobenzoyl)benzenediol)

IT 157550-39-5P 157550-40-8P 157550-41-9P 157550-42-0P
157550-43-1P 157550-44-2P 157550-45-3P 157550-46-4P 157550-47-5P
157550-48-6P 157550-49-7P
RL: PREP (Preparation)
(prepn. and use as light stabilizers)

IT 157550-40-8P
RL: PREP (Preparation)
(prepn. and use as light stabilizers)

RN 157550-40-8 HCAPLUS

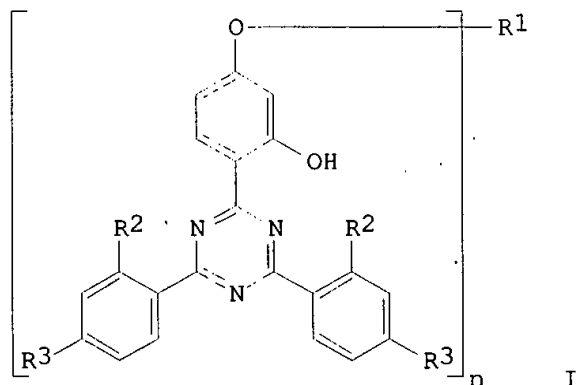
CN Benzenecarboximidic acid, N-octyl-, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1993:613920 HCAPLUS
 DN 119:213920
 TI **UV absorber**-containing photographic material
 IN Leppard, David G.; Slongo, Mario; Toan Vien Van
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 54 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 IC ICM G03C001-815
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 28

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 530135	A1	19930303	EP 1992-810396	19920526
	R: BE, DE, FR, GB, IT, NL				
	JP 05197074	A2	19930806	JP 1992-168646	19920603
PRAI	CH 1991-1642		19910603		
	CH 1991-2600		19910904		
OS	MARPAT 119:213920				
GI					



AB A photog. material is described contg. multiple color photog. emulsion layers, a protective surface layer, a **UV absorber** layer between the protective layer and the emulsion layer where the **UV absorber** is I [n = 1, 2; R₂, R₃ = H, alkyl; when n = 1, R₁ = alkyl, alkyleneoxy, CO₂H, CO₂R₄, O₂CR₅, glycidyl, or GR (G = bond or divalent group; R = substituted polysiloxane group) and when n = 2, R₁ = alkylene, xylylene, biphenyl group, etc.; R₄, R₅ = alkyl]. Optionally the photog. material may contain another **UV absorber**. The material has improved extinction coeff.

ST **UV absorber** photog hydroxyphenyltriazinyl

IT Photographic films
(color, **UV absorbers** for, hydroxyphenyltriazinyl compds. as)

IT 2725-22-6 137658-77-6 137658-78-7 137658-79-8 138968-73-7
139123-70-9 145024-34-6 145024-39-1 145024-40-4 145024-43-7
145024-44-8 149976-05-6

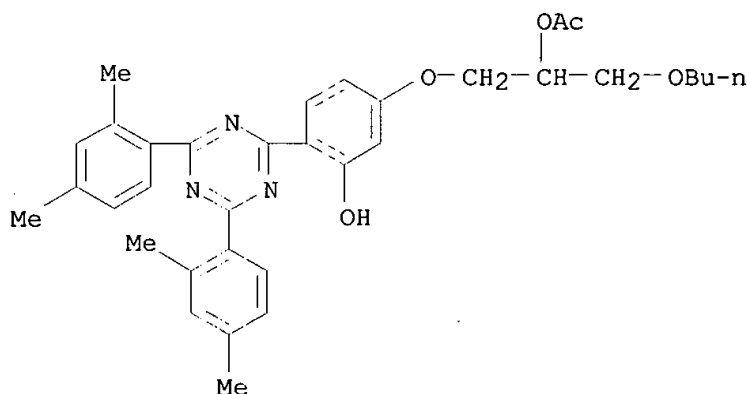
RL: USES (Uses)
(**UV absorber**, in photog. films)

IT 149976-03-4P 149976-04-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as **UV absorber** in photog. films)

IT 149976-04-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as **UV absorber** in photog. films)

RN 149976-04-5 HCAPLUS

CN Phenol, 5-[2-(acetyloxy)-3-butoxypropoxy]-2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI) (CA INDEX NAME)



L17 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:682137 HCAPLUS

DN 115:282137

TI Stabilization of high-solids coating with liquid compositions of triazine **UV absorbers** and preparation of the absorbers

IN Waterman, Paul Sheldon

PA American Cyanamid Co., USA

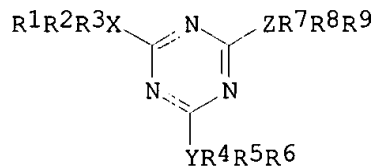
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW

DT Patent

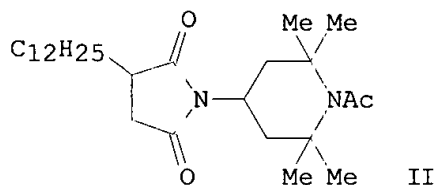
LA English
 IC ICM C07D251-24
 ICS C08K005-3492
 CC 42-5 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 444323	A2	19910904	EP 1990-125824	19901231
	EP 444323	A3	19911113		
	EP 444323	B1	19970319		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 150458	E	19970415	AT 1990-125824	19901231
	ES 2098242	T3	19970501	ES 1990-125824	19901231
	AU 9171102	A1	19910829	AU 1991-71102	19910215
	AU 649997	B2	19940609		
	JP 04211672	A2	19920803	JP 1991-50200	19910225
	JP 2894519	B2	19990524		
	CA 2037097	AA	19910829	CA 1991-2037097	19910226
	BR 9100787	A	19911029	BR 1991-787	19910227
	US 5721298	A	19980224	US 1995-454973	19950531
	US 5759700	A	19980602	US 1995-454972	19950531
	US 5786477	A	19980728	US 1995-454970	19950531
	US 5795499	A	19980818	US 1995-454971	19950531
PRAI	US 1990-486625		19900228		
	US 1989-456917		19891226		
	US 1994-224204		19940317		
OS	MARPAT 115:282137				
GI					



I

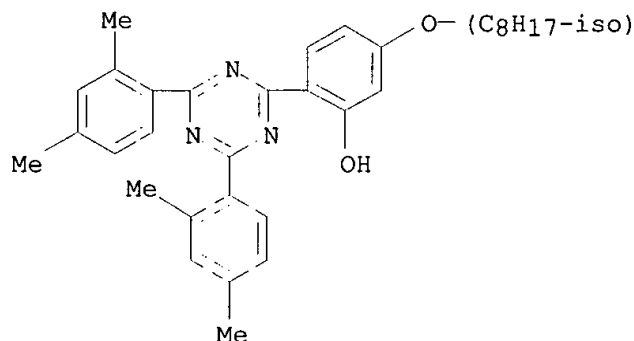


II

AB Polymer coatings are stabilized against light degrdn. by addn. of a liq. compn. comprising an org. solvent and .gtoreq.40 wt% triaryltriazines I (X,Y,Z = multivalent arom. group, R1-9 = H, OH, alkyl, alkoxy, sulfonic, CO2H, halo, haloalkyl, or acylamino, with .gtoreq.1 of R1-9 = OH and attached ortho to the point of attachment to the triazine ring and .gtoreq.1 of R1-9 = alkoxy and attached para to the point of attachment to the triazine ring). Thus, 2,4-bis(2,4-dimethylphenyl)-6-(2,4-dihydroxyphenyl)-1,3,5-triazine was refluxed with mixed isomeric octyl chlorides (95% C8) in MeCOBu-iso at 122.degree. to give 2,4-bis(2,4-dimethylphenyl)-6-[2-hydroxy-4-(C8-alkoxy)phenyl]-1,3,5-triazine (II). An acrylic coating compn. contg. 2% II and 1% hindered amine light stabilizer applied to a steel panel precoated with a primer and a white base layer and cured 30 min at 120.degree. to give a coating with 93% 20.degree. gloss retention after 4000 h in an accelerated weather test.

ST triazine hydroxyalkoxyphenyl **UV absorber** coating; high solids coating **UV absorber**; light stabilizer high

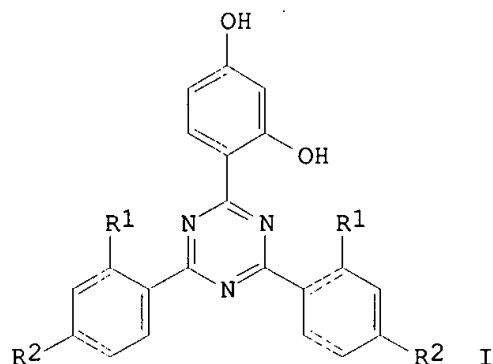
solids coating; acrylic coating **UV absorber**;
 octyloxyhydroxyphenyltriazine **UV absorber** coating
 IT Light stabilizers
 (UV, substituted triaryltriazine derivs., for coatings)
 IT Coating materials
 (high-solids, **UV absorbers** for, substituted
 triaryltriazines as)
 IT 73772-39-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (alkylation by, of hydroxyaryltriazines)
 IT 1668-53-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (alkylation of, with isomeric octyl chloride mixt.)
 IT 106917-31-1
 RL: USES (Uses)
 (light stabilizer, with substituted triaryltriazine **UV
 absorbers**, for coatings)
 IT 137759-38-7P
 RL: PREP (Preparation)
 (prepn. of, as UV stabilizers for coatings)
 IT 137759-38-7P
 RL: PREP (Preparation)
 (prepn. of, as UV stabilizers for coatings)
 RN 137759-38-7 HCAPLUS
 CN Phenol, 2-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-5-(isooctyloxy)-
 (9CI) (CA INDEX NAME)



L17 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1991:122423 HCAPLUS
 DN 114:122423
 TI Preparation of 2-(2',4'-dihydroxyphenyl)-4,6-diaryl-s-triazines
 IN Burdeska, Kurt; Guenter, Franz
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 IC ICM C07D251-24
 ICA C07D251-22
 CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 395938	A2	19901107	EP 1990-107370	19900418

EP 395938	A3	19911204		
EP 395938	B1	19960117		
R: AT, CH, DE, ES, FR, GB, IT, LI, SE				
US 5084570	A	19920128	US 1990-510494	19900418
AT 133164	E	19960215	AT 1990-107370	19900418
ES 2081868	T3	19960316	ES 1990-107370	19900418
CA 2014886	AA	19901021	CA 1990-2014886	19900419
JP 02292267	A2	19901203	JP 1990-103290	19900420
JP 2857219	B2	19990217		
ZA 9002997	A	19901228	ZA 1990-2997	19900420
BR 9001844	A	19910618	BR 1990-1844	19900420
US 5106972	A	19920421	US 1991-739963	19910805
PRAI CH 1989-1536		19890421		
US 1990-510494		19900418		
OS MARPAT 114:122423				
GI				



- AB The title compds. (I; R¹ = H, C₁-4 alkyl; R² = C₁-4 alkyl), useful as **UV absorbers** and starting materials, were prep'd. by 1) Friedel-Crafts reaction of 2,4-dichloro-6-methylthio-1,3,5-triazine (II) with 3-R²C₆H₄R¹, 2) chlorination of the resulting 2,4-diphenyl-6-methylthio-1,3,5-triazine, and 3) Friedel-Crafts reaction of the resulting 2,6-diphenyl-6-chloro-1,3,5-triazine with 3-HOC₆H₄OH. Thus, II in PhMe was added over 1.5 h to AlCl₃ in PhMe at 75.degree. and the mixt. was kept at 85-90.degree. for 5.5 h to give 91.2% 2,4-bis(4-methylphenyl)-6-methylthio-1,3,5-triazine. The latter in PhMe at 55-60.degree. was treated with SO₂Cl₂ in PhMe over 40 min followed by stirring for 30 min to give the 6-chloride, which was coupled with 3-HOC₆H₄OH to give I (R¹ = H, R² = Me).
- ST hydroxyphenylmethylphenyltriazine prepn **UV absorber**;
triazine triphenyl prepn **UV absorber**
- IT Friedel-Crafts reaction
(of dichloro(methylthio)triazine with methylbenzenes)
- IT Light stabilizers
(UV, triphenyltriazine derivs.)
- IT 108-46-3, 1,3-Benzenediol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(Friedel-Crafts reaction of, with chlorodiphenyltriazine deriv.)
- IT 108-38-3, m-Xylene, reactions 108-88-3, Toluene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(Friedel-Crafts reaction of, with dichloro(methylthio)triazine)

IT 13705-05-0, 2,4-Dichloro-6-methylthio-1,3,5-triazine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (Friedel-Crafts reaction of, with toluene or xylene)

IT 1237-53-2P 21902-34-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and Friedel-Crafts reaction of, with resorcinol)

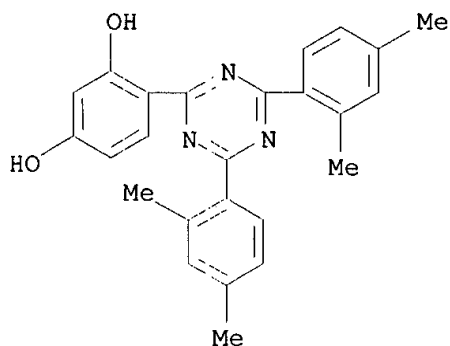
IT 99939-91-0P 132427-55-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and conversion of, to chloride deriv.)

IT 1668-53-7P 38375-15-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as UV absorber and intermediate)

IT 1668-53-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as UV absorber and intermediate)

RN 1668-53-7 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI)
 (CA INDEX NAME)



L17 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:63535 HCAPLUS

DN 114:63535

TI Light-stabilizers for polymers containing hindered amine and light
 -absorbing groups

IN Ravichandran, Ramanathan; Galbo, James P.

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 26 pp.
 CODEN: EPXXDW

DT Patent

LA English

IC ICM C07D211-94
 ICS C07D401-12; C07D401-14; C08K005-3492; C08K005-3435

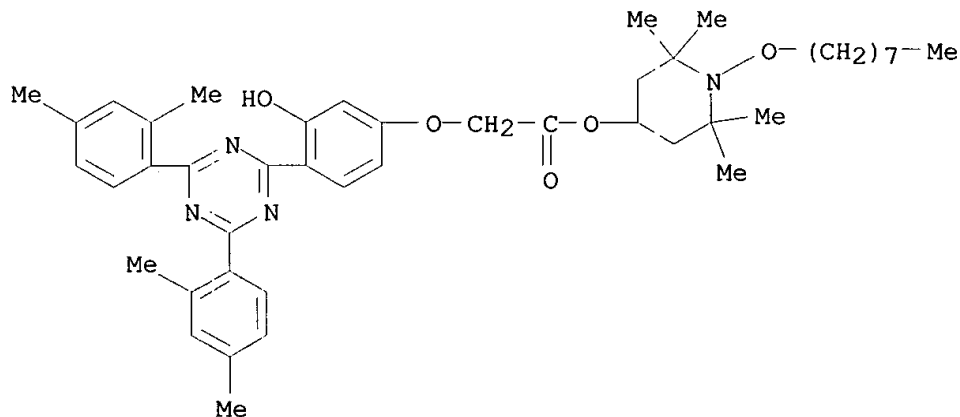
CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 27, 28, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 389427	A2	19900926	EP 1990-810195	19900313
	EP 389427	A3	19911127		
	EP 389427	B1	19940427		
	R: DE, FR, GB, IT				
	US 5021478	A	19910604	US 1990-479880	19900214
	CA 2012503	AA	19900921	CA 1990-2012503	19900319

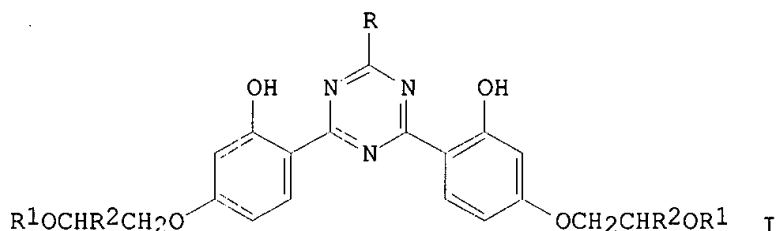
JP 02300168 A2 19901212 JP 1990-73181 19900322
 JP 2860589 B2 19990224
 PRAI US 1989-326848 19890321
 OS MARPAT 114:63535
 AB The title compds. are less basic than other stabilizers and so do not related curing. Refluxing Me 3-benzotriazol-2-yl-5-tert-butyl-4-hydroxyhydrocinnamate 30.0 and 4-hydroxy-1-methoxy-2,2,6,6-tetramethylpiperidine 19.1 g in xylene with distn. of H2O, cooling to 100.degree., adding LiNH2, and refluxing 16 h with distn. of MeOH gave 24.5 g 1-methoxy-2,2,6,6-tetramethylpiperidin-4-yl 3-benzotriazol-2-yl-5-tert-butyl-4-hydroxyhydrocinnamate.
 ST hindered amine UV stabilizer; piperidine hindered UV stabilizer; benzotriazole deriv light stabilizer
 IT Light stabilizers
 (hindered amines bearing **UV-absorbing** groups, for polymers, manuf. of)
 IT Coating materials
 Polymers, uses and miscellaneous
 RL: USES (Uses)
 (light stabilizers for, hindered amines bearing **UV-absorbing** groups as)
 IT 131806-85-4P 131806-86-5P 131806-87-6P 131806-88-7P 131806-89-8P
 131806-90-1P 131806-91-2P 131806-92-3P 131806-93-4P
131806-94-5P 131806-95-6P 131806-96-7P 131806-97-8P
 131806-98-9P 131806-99-0P 131807-00-6P 131807-01-7P 131807-02-8P
 131807-03-9P
 RL: **PREP (Preparation)**
 (light stabilizers for polymers, manuf. of)
 IT 131807-11-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidn. of)
 IT 131807-10-8P
 RL: PREP (Preparation)
 (prepn. of)
 IT 131807-09-5P
 RL: PREP (Preparation)
 (prepn. of, and reaction with dihydroxyoxanilide)
 IT 131807-08-4P
 RL: PREP (Preparation)
 (prepn. of, and reaction with hydroxybenzophenone)
 IT 2169-69-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (ctyloxy)tetramethylpiperidinol)
 IT 19389-82-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (cyclohexyloxy)tetramethylpiperidinamine)
 IT 49769-78-0, Dimethylbenzylmalonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (cyclohexyloxy)tetramethylpiperidinol)
 IT 1668-53-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with (octyloxy)tetramethylpiperidiny lchloroacetate)
 IT 112993-72-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with [(cyclohexyloxy)tetramethylpiperidiny l]chloroacetamide)
 IT 131-56-6, 2,4-Dihydroxybenzophenone
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with acetic acid derivs.)
 IT 122586-72-5 131807-05-1

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with benzotriazolylhydroxyhydrocinnamate)
 IT 79-04-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with butylaminomethoxytetramethylpiperidine)
 IT 122586-97-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with chloroacetyl chloride)
 IT 131807-04-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cinnamates)
 IT 19532-73-1, 2,2'-Dihydroxyoxanilide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with cyclohexyloxytetramethylpiperindyl chloroacetate)
 IT 96-32-2, Methylbromoacetate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dihydroxybenzophenone)
 IT 131807-06-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dixylyl(dihydroxyphenyl)triazine)
 IT 131807-07-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with ethoxyhydroxyoxanilide)
 IT 122586-84-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with hydroxyethoxypropoxybenzophenone)
 IT 84268-33-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with hydroxymethoxytetramethylpiperidine)
 IT 21121-97-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with piperidinol derivs.)
 IT 87018-00-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactions of, with benzophenones and benzylmalonates)
 IT **131806-94-5P**
 RL: **PREP (Preparation)**
 (light stabilizers for polymers, manuf. of)
 RN 131806-94-5 HCAPLUS
 CN Acetic acid, [4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-, 2,2,6,6-tetramethyl-1-(octyloxy)-4-piperidinyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1989:553846 HCAPLUS
 DN 111:153846
 TI Preparation of reactive, **nonyellowing** triazines useful as UV
 screening agents for polymers
 IN Migdal, Cyril A.; Hines, John B.; Kluger, Edward W.
 PA Milliken Research Corp., USA
 SO U.S., 6 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C07D251-12
 NCL 544216000
 CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 37, 42
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4826978	A	19890502	US 1987-139342	19871229
	US 4962142	A	19901009	US 1988-270871	19881114
PRAI	US 1987-139342		19871229		
OS	CASREACT 111:153846; MARPAT 111:153846				
GI					



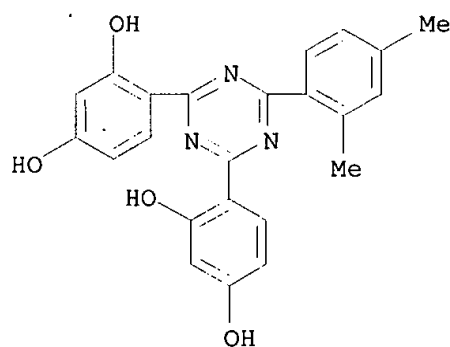
AB 2,2'-(1,3,5-Triazine-2,4-diyl)bis[5-ethoxyphenol] derivs. I (R = Ph bearing an electron-withdrawing substituent, esp. Br, Cl, F; R1 = H, C2-7 acyl; R2 = H, Me) were prepd. Thus, cyanuric chloride and AlCl3 were heated 18 h at 125.degree. in PhCl to give 2,4-dichloro-6-(4-chlorophenyl)-1,3,5-triazine. AlCl3 was added to a mixt. of the latter and resorcinol in PhNO2 at -10.degree., followed by stirring 16 h at room temp. and 4 h at 50.degree., to give 2-(4-chlorophenyl)-4,6-bis(2,4-dihydroxyphenyl)-1,3,5-triazine. This was etherified with ClCH2CH2OH in EtOCH2CH2OH to give I (R = 4-ClC6H4, R1 = R2 = H) (II). A polymer resin prepd. from di-Me terephthalate, ethylene glycol, and 0.5 part II was clear **yellow** and **absorbed light** at 250-400 nm. Incorporation of II did not affect polymn. kinetics, nor did it sublime out or discolor the resin.

ST triazinebisphenol prepn light stabilizer polymer; plastic light stabilizer triazinebisphenol prepn; coating material light stabilizer triazinebisphenol

IT Coating materials
 Polymers, uses and miscellaneous
 RL: USES (Uses)
 (light stabilizers for, triazinebisphenols as reactive)

IT Light stabilizers
 (reactive, triazinebisphenols, for coating materials and polymers)

- IT 108-46-3, 1,3-Benzenediol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (arylation by, of chlorotriazine derivs.)
- IT 100-59-4, Phenylmagnesium chloride 108-38-3, reactions 108-86-1,
 Bromobenzene, reactions 108-90-7, Chlorobenzene, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (arylation by, of cyanuric chloride)
- IT 108-77-0, Cyanuric chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (arylation of, by benzene derivs.)
- IT 107-07-3, 2-Chloroethanol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (etherification by, of triazinebisphenols)
- IT 10202-46-7P 91064-30-1P 122864-80-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and arylation of, by resorcinol)
- IT 1440-03-5P 2125-25-9P **25023-99-8P** 122864-81-7P
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP**
(Preparation); RACT (Reactant or reagent)
 (prepn. and etherification of, by chloroethanol)
- IT 122897-09-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as non-yellowing UV screener)
- IT 2125-28-2P 122864-76-0P 122864-77-1P **122864-78-2P**
 122864-79-3P
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (prepn. of, as reactive light stabilizer for coating materials and
 polymers)
- IT **25023-99-8P**
 RL: **SPN (Synthetic preparation); PREP (Preparation);**
PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and etherification of, by chloroethanol)
- RN 25023-99-8 HCAPLUS
- CN 1,3-Benzenediol, 4,4'-[6-(2,4-dimethylphenyl)-1,3,5-triazine-2,4-diyl]bis-
 (9CI) (CA INDEX NAME)



- L17 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2002 ACS
- AN 1987:68642 HCAPLUS
- DN 106:68642
- TI Sulfonated 2-hydroxyphenyl-s-triazines as photoprotective agents for wool
- AU Waters, Peter J.; Milligan, Brian
- CS Div. Protein Chem., CSIRO, Parkville, 3052, Australia
- SO Polym. Degrad. Stab. (1986), 16(2), 187-97

CODEN: PDSTDW; ISSN: 0141-3910

DT Journal

LA English

CC 40-9 (Textiles and Fibers)

AB Three sulfonated 2-hydroxyphenyl-s-triazines were examd. as photoprotective agents for wool. All 3 **UV absorbers** conferred protection against phototendering caused by exposure either to simulated sunlight or to summer sunlight through window glass. Two of the absorbers also retarded **photoyellowing**, but the third accelerated it. The absorbers retarded the phototendering and photofading of wool fabrics dyed with selected 2:1-premetallized dyes.

ST wool light stabilizer sulfonated hydroxyphenyltriazine; hydroxyphenyl triazine sulfonated light stabilizer

IT Light stabilizers
(sulfonated hydroxyphenyltriazines, for wool textiles)

IT Discoloration prevention
(agents, sulfonated hydroxyphenyltriazines, for wool textiles)

IT Textiles
(wool, light stabilizers for, sulfonated hydroxyphenyltriazines as)

IT 103193-41-5 103193-42-6 103193-54-0
RL: USES (Uses)
(light stabilizers, for wool textiles)

IT 103193-40-4P **103193-49-3P**
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and acetylation of)

IT 38369-95-8P 106556-36-9P
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and sulfonation of)

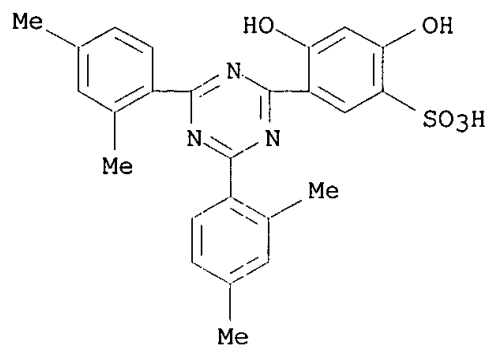
IT 618-39-3, Benzamidine
RL: RCT (Reactant)
(reaction of, with Ph dihydroxybenzoate or Ph hydroxymethoxybenzoate)

IT 16700-99-5 33454-09-0, Phenyl 2-hydroxy-4-methoxybenzoate
RL: RCT (Reactant)
(reaction of, with benzamidine)

IT **103193-49-3P**
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation)**
(prepn. and acetylation of)

RN 103193-49-3 HCAPLUS

CN Benzenesulfonic acid, 5-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-2,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)

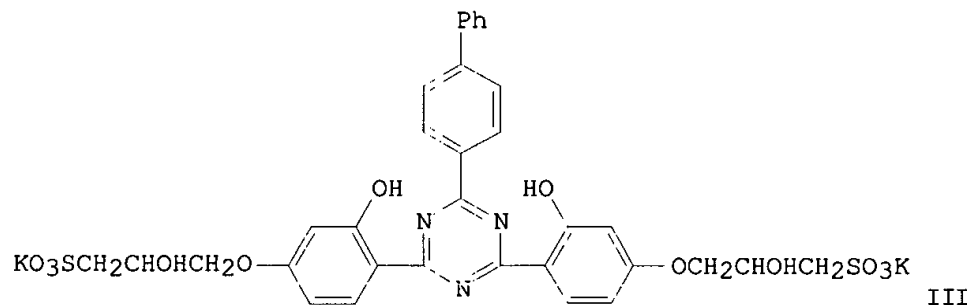
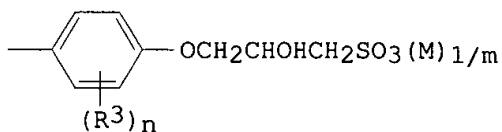
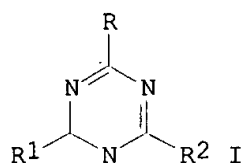


● Na

L17 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1986:524162 HCAPLUS
 DN 105:124162
 TI Hydroxyphenyltriazines and their use as **UV absorbers**
 IN Fryberg, Mario; Jan, Gerald; Mariaca, Raul; Kramp, Ekkehard
 PA Ciba-Geigy A.-G. , Switz.
 SO Eur. Pat. Appl., 60 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 IC ICM C07D251-24
 ICS C07D251-22; C07D401-04; C07D413-12; C07D417-12; G03C001-92
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 28

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 165608	A2	19851227	EP 1985-107628	19850620
	EP 165608	A3	19861203		
	EP 165608	B1	19910102		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 61024577	A2	19860203	JP 1985-135839	19850621
	JP 05017226	B4	19930308		
PRAI	CH 1984-3028		19840622		
GI					



AB Triazine derivs. of the formula I [R, R₁, R₂ = II (R₃ = C1-4 alkyl, C1-4 alkoxy, OH, or COR₄ where R₄ = C1-8 alkyl or Ph; M = a cation; m = 1 or 2; n = 0-3), alkyl, aryl, heterocyclyl, and the like; and .gtoreq.1 of R-R₂ is II] are described for use as **UV absorbers** in color photog. materials. The derivs. are incorporated at 200-400 mg/m². Thus, a color photog. material contg. a magenta coupler was exposed and processed to give a magenta d. of 1.0. This material was then coated with a gelatin layer contg. III at 500 mg/m². The material was then exposed at 20 kJ/cm² in an alternating dry and moist atm to show a residual d. of 0.82 vs. 0.20 for a III-free control.

ST hydroxyphenyltriazine deriv **UV absorber** photog; color photog hydroxyphenyltriazine deriv stabilizer

IT Photographic stabilizers

(UV, hydroxyphenyltriazine derivs. as)

IT Light stabilizers

(UV, hydroxyphenyltriazine derivs. as, for color photog. materials)

IT Photographic films

(color, contg. hydroxyphenyltriazine derivs. as **UV absorbers**)

IT 104209-42-9 104209-43-0 104209-44-1 104209-45-2

RL: DEV (Device component use); USES (Uses)

(color photog. film contg., as **UV absorber**)

IT 104209-65-6P 104209-66-7P 104209-67-8P 104209-68-9P

104209-69-0P 104209-70-3P 104209-71-4P 104209-72-5P 104209-73-6P

104209-74-7P 104209-75-8P 104209-76-9P 104209-77-0P 104209-78-1P

104209-79-2P 104209-80-5P 104209-81-6P 104209-82-7P

104209-83-8P 104209-84-9P 104209-85-0P 104209-86-1P

104209-87-2P 104209-88-3P 104209-89-4P 104209-90-7P 104209-91-8P

104209-92-9P 104225-00-5P 104225-01-6P

RL: **PREP (Preparation)**

(prepn. and color photog. applications of, as **UV absorber**)

IT 104209-93-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

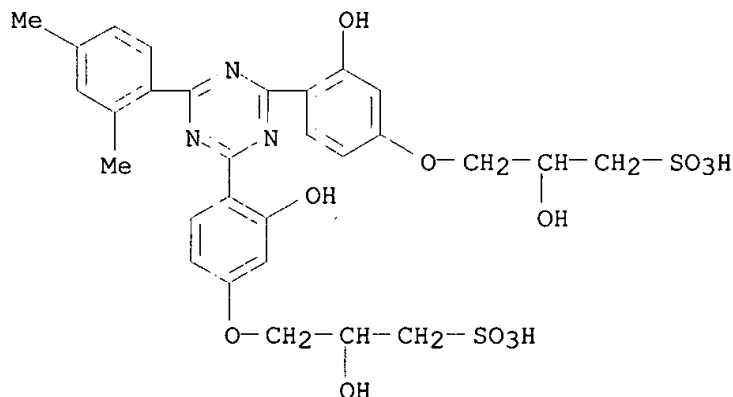
(prepn. and reaction of, with resorcinol)

IT 104209-94-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and reaction of, with sodium chlorohydroxypropylsulfonate)

IT 1440-00-2P 1440-03-5P 1853-73-2P 1853-75-4P 1853-76-5P
 2125-23-7P 2125-25-9P 4000-90-2P 4604-25-5P 4679-26-9P
 4925-82-0P 5069-87-4P 104209-46-3P 104209-47-4P 104209-48-5P
 104209-49-6P 104209-50-9P 104209-51-0P 104209-52-1P 104209-53-2P
 104209-54-3P 104209-55-4P 104209-56-5P 104209-57-6P 104209-58-7P
 104209-59-8P 104209-60-1P 104209-61-2P 104209-62-3P 104209-63-4P
 104209-64-5P 104224-98-8P 104224-99-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and reactions of)
 IT 108-77-0
 RL: RCT (Reactant)
 (reaction of, with (aminophenyl)methylbenzothiazole)
 IT 108-46-3, reactions
 RL: RCT (Reactant)
 (reaction of, with [(aminophenyl)methylbenzothiazolyl]dichlorotriazine)
 IT 92-36-4
 RL: RCT (Reactant)
 (reaction of, with cyanuric chloride)
 IT 41980-40-9
 RL: RCT (Reactant)
 (reaction of, with hydroxyphenyltriazine derivs.)
 IT 104209-65-6P
 RL: PREP (Preparation)
 (prepn. and color photog. applications of, as UV
 absorber)
 RN 104209-65-6 HCAPLUS
 CN 1-Propanesulfonic acid, 3,3'-[[6-(2,4-dimethylphenyl)-1,3,5-triazine-2,4-
 diyl]bis[(3-hydroxy-4,1-phenylene)oxy]]bis[2-hydroxy-, dipotassium salt
 (9CI) (CA INDEX NAME)



● 2 K

L17 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1970:121590 HCAPLUS
 DN 72:121590
 TI Hydroxyphenyl-s-triazine protective materials against ultraviolet rays for
 textiles
 IN Duennenberger, Max; Biland, Hans R.; Luethi, Christian
 PA CIBA Ltd.
 SO Patentschrift (Switz.), 22 pp.

CODEN: SWXXAS
 DT Patent
 LA German
 IC B01J; C08K; C07D
 CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 484695	A	19700131	CH 1963-484695	19631230
PRAI	CH 1963-16014		19631230		

GI For diagram(s), see printed CA Issue.

AB The triazines (I) are prepd. and used as **uv light absorbers** for textile materials such as cellulose acetate, nylon 66, poly(vinyl chloride), paper, polyethylene, and polypropylene. I are prepd. by known methods, e.g., with Friedel-Crafts catalysts in inert org. solvents (R-R5 and m.p. given): OH, OH, OH, OH, OH, OH, >300.degree.; HOCH2CH2O, OH, OH, H(OCH2CH2)2O, OH, OH, 283-5.degree.; OH, OH, OH, OH, H, H, >300.degree.; H2C:CHCH2O, OH, OH, CH2:CHCH2O, H, H, 178.degree.; OH, OH, OH, PhCH2O, H, H, 242-6.degree.; PhCH2O, OH, OH, Ph-CH2O, H, H, 171.0-2.5.degree.; 4-ClC6H4CH2O, OH, OH, 4-ClC6H4-CH2O, H, H, 265-7.degree.; HOCH2CH2O, OH, OH, HOCH2CH2O, H, H, 252-3.degree.; MeCH:CHCH2O, OH, OH, MeCH:CHCH2O, H, H, 212-13.degree.; NC(CH2)3O, OH, OH, NC(CH2)3O, H, H, 223-4.degree.; EtO2C(CH2)3O, OH, OH, EtO2C(CH2)3O, H, H, 100-1.degree.; Cl(CH2)3O, OH, OH, Cl(CH2)3O, H, H, 181-3.degree.; BzCH2O, OH, OH, BzCH2O, H, H, 280-1.degree.; H2C:CHCH2O, OH, OH, H2C:CHCH2O, H, tert-Bu, 146-7.degree.; OH, OH, OH, H2C:CHCH2O, H, tert-Bu, 230-1.degree.; PhCH2O, OH, OH, PhCH2O, H, tert-Bu, 212-14.degree.; HOCH2CH2O, OH, OH, H(OCH2CH2)2O, H, tert-Bu, 181-8.degree.; EtO2CCH2O, OH, OH, EtO2CCH2O, H, tert-Bu, 169-70.degree.; EtO2CCH2O, OH, EtO2CCH2O, H, tert-Bu, 139-41.degree.; H2C:CHCH2O, OH, OH, H2C:CHCH2O, H, OMe, 135.0-7.5.degree.; PhCH2O, OH, OH, PhCH2O, H, OMe, 87-8.degree.; EtO2CCH2O, OH, OH, EtO2CCH2O, H, OMe, 152-3.degree.; EtO2CCH2O, OH, EtO2CCH2O, EtO2CCH2O, H, OMe, 174-6.degree.; H2C:CHCH2O, OH, OH, H2C:CHCH2O, H, Cl, 143-4.degree.; PhCH2O, OH, OH, PhCH2O, H, Cl, 177-8.degree.; H2C:CHCH2O, OH, OH, H2C:CHCH2O, OH, Ph, 136-7.degree.; H2C:CHCH2O, OH, OH, H2C:CHCH2O, OH, H2C:CHCH2O, 168-9.degree.; Ph-CH2O, OH, OH, PhCH2O, OH, OH, 249-50.degree.; Me, Me, Me, Me, OH, OH, 197.5-8.5.degree.; Me, Me, Me, Me, OH, H2C:CHCH2O, 141-2.degree.; Me, Me, Me, Me, OH, HO2CCH2O, 215-16.degree.; Me, Me, Me, Me, OH, PhCH2O, 164.degree.; Me, Me, Me, Me, OH, 4-ClC6H4CH2O, 153-5.degree.; Me, Me, Me, Me, OH, HOCH2CH2O, 176.degree.; Me, Me, Me, Me, OH, EtO2CCH2O, 94-7.degree.; Me, Me, Me, Me, OH, EtO2C(CH2)3O, 125-6.degree.; Me, Me, Me, Me, OH, MeCH:CHCH2O, 159-60.degree.; Me, Me, Me, Me, OH, H(OCH2CH2)2O, 93-4.degree.. Thus, a film prepd. from cellulose acetate contg. 1 % I (R = HOCH2CH2O, R1 = R2 = OH, R3 = H(OCH2CH2)2O, R4 = H, R5 = tert-Bu) had transparency values, before and after 100 hr exposure in a Fade-Ometer, of 0, 9, 44, 72, and 83%, resp., at wavelengths of 280-370, 380, 390, 400, and 410 m.mu..

ST hydroxyphenyl triazines; triazines hydroxyphenyl; **UV**

absorbers textiles; **absorbers** textiles **UV**

IT Textiles

(light stabilizers for, triazinylphenol derivs. as)

IT Light, ultraviolet, chemical effects

(stabilizers, triazinylphenol derivs. as, for textiles)

IT Acetic acid, [[6-(p-tert-butylphenyl)-s-triazine-2,4-diyl]bis[(3-hydroxy-p-phenylene)oxy]]di-, diethyl ester

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT	1237-53-2P	1439-98-1P	1439-99-2P	1440-00-2P	1440-01-3P
	1440-02-4P	1440-03-5P	1440-04-6P	1440-05-7P	1440-06-8P
	1440-07-9P	1440-08-0P	1440-09-1P		

1440-10-4P 1668-53-7P 1908-75-4P 1908-76-5P
 1908-77-6P 1908-78-7P 1908-79-8P 1909-36-0P 1909-37-1P
 1909-38-2P 1909-40-6P 1909-41-7P 1909-42-8P
 1974-79-4P 2125-23-7P 2125-24-8P 2125-25-9P 2125-26-0P
 2125-27-1P 2125-28-2P 2125-29-3P 2125-30-6P 2125-31-7P
 3866-22-6P 3949-27-7P 4010-13-3P 4018-89-7P 4551-31-9P

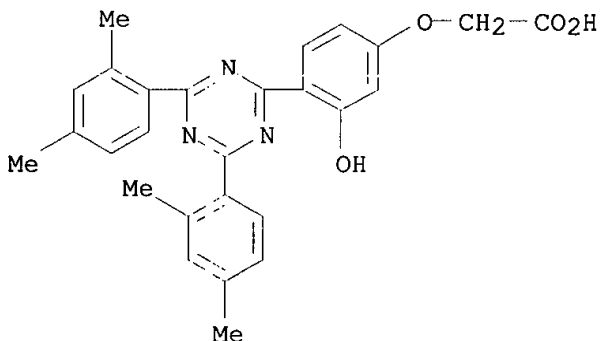
RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

IT 1440-06-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 1440-06-8 HCAPLUS

CN Acetic acid, [4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]- (9CI) (CA INDEX NAME)



L17 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2002 ACS

AN 1970:112267 HCAPLUS

DN 72:112267

TI Light-stabilized 4-triazinyl-3-hydroxyphenyl acrylate polymers and copolymers

IN Huber, Helmut; Schaefer, Paul; Biland, Hans R.; Luethi, Christian; Eschle, Karl; Duennenberger, Max

PA CIBA Ltd.

SO Patentschrift (Switz.), 9 pp.

CODEN: SWXXAS

DT Patent

LA German

IC C08F

CC 36 (Plastics Manufacture and Processing)

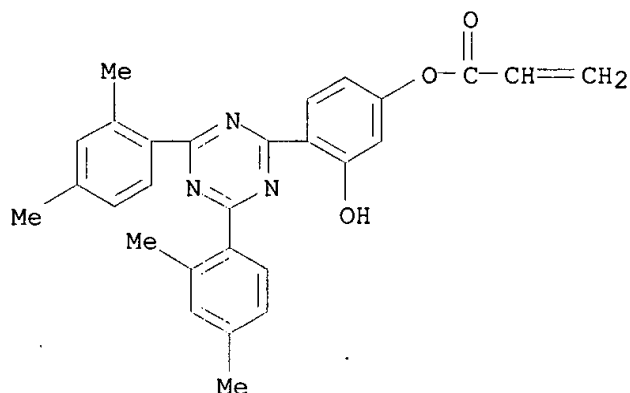
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 481954	A	19691130	CH 1965-481954	19651109
PRAI	CH 1965-15401		19651109		

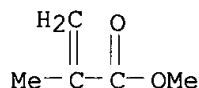
AB **Uv light-absorbing** compds. (I) [where Q = CH:CH or CMe:CH and R1-R4 = Me, H, or Cl] (II) were soln. polyd., soln. or emulsion copolyd. with Bu acrylate, styrene (III), stearyl methacrylate (IV), Bu methacrylate (V), Me methacrylate (VI), or their mixts.; or grafted to polyethylene (VII) to give light-stable polymers resistant to **yellowing**. Adding 0.5-4% copolymers of II (R1-R4 = Me; Q = CH:CH) (VIII) and III or IV or homopolymer of II (R1 = R3 = Cl; R2 = R4 = H, Q = CH:CH) (IX) to lacquer, VII, or polypropylene improved their resistance to migration, cracking, or blooming under uv light. For example, 15 parts 2,4-bis(2,4-dimethylphenyl)-6-(2,4-dihydroxyphenyl)-s-

triazine, prepd. by Friedel-Crafts reaction from cyanuric chloride, 1,3-dimethylbenzene, and resorcinol in the presence of $AlCl_3$, was dissolved in 570 parts hot dry benzene; 0.01 part thiodiphenylamine and 5.95 parts pyridine (X) added; 3.4 parts acryloyl chloride (XI) in 40 parts benzene slowly added dropwise; and the mixt. heated 0.5 hr at 70.degree. to ppt. 15.2 parts I (Q = 2-pyridinioethyl chloride, R1-R4 = Me) (XII), m. 196-8.degree.. XII (15 parts) in 2000 parts H2O was mixed 0.5 hr with 26 parts 2N NaOH to give 11 parts crude VIII, m. 151-3.degree. after recrystn. Use of 8.4 parts Et3N instead of X and 3.8 parts XI in a similar manner gave 12 parts VIII, m. 154-5.degree.. IX, m. 201-2.degree.; II (R1 = Cl, R2 = H, Q = CH:CH, R3 = R4 = Me) (XIII), m. 117-19.degree.; II (R1-R4 = H, Q = CH:CH) (XV), m. 161-3.degree.; and II (R1-R4 = Me, Q = CMe:CH) (XV), m. 122.5.degree., were prepd. similarly using Et3N catalyst. Azobisisobutyronitrile (0.1 part) in 5 parts benzene was added to 5 parts VIII in 15 parts benzene while heating 6 hr at 75.degree. under N to give a polymer, softening range 170-85.degree.. Polymers prepd. similarly from IX, XIII, and XIV, softening at 225-30.degree., 225-35.degree., and 205-10.degree., resp., gave clear colorless or yellowish light uv-absorbing films. All copolymers were prepd. similarly from VIII or by emulsion polymn. with K2S2O8 catalyst. Softening temps. of soln. copolymers prepd. from 5 parts VIII and III 6, V 5, or VI 6 parts were 135-40.degree., 90-100.degree., and 155-65.degree., resp. VII (5 parts) was dissolved at 80.degree. in 45 parts cyclohexane under N; the soln. cooled to 60.degree.; 0.06 part lauroyl peroxide in 5 parts cyclohexane added; after 10 min, 1 part XIII added and the mixt. heated 4 hr at 80.degree. to give uv light-absorbing graft copolymer contg. 8% XIII. Polymg. XIII 4 hr before addn. of VII gave no graft copolymer.

- ST UV resistant polymers; triazinylhydroxyphenyl acrylates; acrylates triazinylhydroxyphenyl; methacrylates triazinylhydroxyphenol
- IT Polymerization
(of triazinylhydroxyphenyl acrylates)
- IT 27028-39-3, preparation 27028-40-6, preparation 28881-68-7, preparation
RL: USES (Uses)
(graft, light-stable)
- IT 27101-66-2P, preparation 27102-70-1P, preparation
27028-34-8 27028-35-9, preparation 27028-36-0 27028-37-1, preparation 27028-38-2
RL: PREP (Preparation)
(light-stable)
- IT 27101-66-2P, preparation
RL: PREP (Preparation)
(light-stable)
- RN 27101-66-2 HCAPLUS
- CN Methacrylic acid methyl ester, polymer with 4-(4,6-di-2,4-xylyl-s-triazin-2-yl)-3-hydroxyphenyl acrylate (8CI) (CA INDEX NAME)
- CM 1
- CRN 13391-06-5
- CMF C28 H25 N3 O3



CM 2

CRN 80-62-6
CMF C5 H8 O2

L17 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2002 ACS
 AN 1970:79103 HCAPLUS
 DN 72:79103
 TI o-Hydroxyphenyl-s-triazine **ultraviolet absorbers**
 IN Duennenberger, Max; Biland, Hans R.; Luethi, Christian
 PA CIBA Ltd.
 SO Patentschrift (Switz.), 7 pp. Addn. to Swiss 467833
 CODEN: SWXXAS
 DT Patent
 LA German
 IC B01J; C08K; C07D
 CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
 FAN.CNT 1

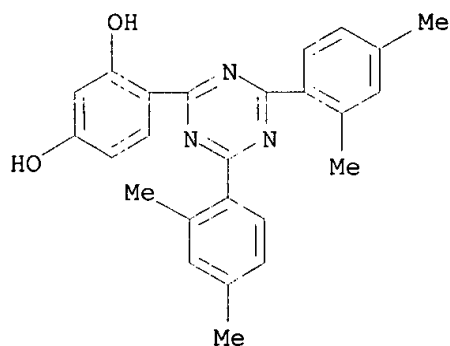
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 480091	A	19691031	CH 1963-480091	19630923
PRAI	CH 1963-11688		19630923		

GI For diagram(s), see printed CA Issue.

AB Addn. to Swiss 467,833. 2-Chloro-4,6-bis(2,4-dimethylphenyl)-s-triazine is reacted with resorcinol in the presence of AlCl₃ to prep. I (R = H) (Ia), m. 197.5-8.5.degree. (H₂O-HCONMe₂). Ia is treated with Me₂SO₄, Et₂SO₄, PrBr, and octyl bromide in water or HCONMe₂ in the presence of NaOH to prep. I (R = Me), m. 179.5-180.0.degree. (benzene-MeOH), I (R = Et) (Ib), m. 155-6.degree., I (R = Pr), m. 128.5-9.0.degree. (CH₂Cl₂-EtOH) and I (R = octyl), m. 83.5-4.0.degree.. I are useful as **uv light absorbers** for increasing the **light** stability of cellulose acetate (II), polyamides, poly(vinyl chloride), paper, polyethylene, and similar materials. Thus, II film contg. 1% Ib was undamaged after 100 hr aging in a Fade-Ometer.

ST **UV absorbers** triazines; triazines dixylyl

hydroxyphenyl
IT Light, ultraviolet, chemical effects
(stabilizers, triazine derivs. as, for textiles and plastics)
IT 1668-53-7P 1820-28-6P 1820-29-7P
2725-22-6P 3882-65-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 1668-53-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 1668-53-7 HCAPLUS
CN 1,3-Benzenediol, 4-[4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl]- (9CI)
(CA INDEX NAME)



L17 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2002 ACS
AN 1968:410484 HCAPLUS
DN 69:10484
TI hydroxyphenyl-1,3,5-triazine derivatives containing sulfonic groups for e
catalyst.ang.
PA CIBA Ltd.
SO Fr., 18 pp.
CODEN: FRXXAK
DT Patent
LA French
IC C07D
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1494413		19670808		
PRAI	CH		19650924		

GI For diagram(s), see printed CA Issue.

AB The title compds., which are used as stabilizers for perfumes, soaps, coatings, paints, and gelatin in photographic plates, are prepd. by treating hydroxyphenyl-1,3,5-triazine with an alkanesultone in an inert org. solvent in the presence of an alkali. Thus, 12.2 parts propanesultone (I) in 120 parts Me2CO was added to a soln. contg. NaOH 5.7, 2,4-bis(2,4-dimethylphenyl)-6-(2,4-dihydroxyphenyl)-1,3,5-triazine (II) (Fr. 1379138) 40, and Me2CO 800 parts. The mixt. was stirred 2 hrs. at 35.degree. and 2 hrs. at 45.degree., refluxed 18 hrs., cooled in ice, and filtered to give III, m. 330.degree. (HCONMe2-alc.). III was converted to the free acid by cation-exchange resins. III (5.7 parts in 300 parts H2O) was treated at 70-80.degree. with a soln. of 20 parts Pb(NO3)2 in 200 parts H2O, cooled to 15.degree., filtered, and the residue

dried in vacuo at 120.degree. to give the Pb deriv. softening at 230.degree. and m. >320.degree.. Pb(NO₃)₂ could be replaced by BaCl₂·2H₂O, NiCl₂·6H₂O, CoSO₄·7H₂O, ZnCl₂, CaCl₂, CuCl₂, and CdCl₂ to give III metal derivs., m. >320.degree., 290-320.degree., 295-300.degree., 250-6.degree., >310.degree., <188.degree., and <310.degree., resp. Other hydroxyphenyl-1,3,5-triazines (IV) were treated similarly with I [R₁, R₂, and m.p. (of the product) given]: Cl, H, -; H, H, <300.degree.; tert-Bu, H, <310.degree.; OMe, H, <300.degree.; Ph, H, 300.degree.; H, H, <300.degree.; and OH, OH, <300.degree.. II when treated similarly with butanesultone and NaOH gave a product m. >300.degree.. A compn. contg. poly(vinyl chloride) 100, dioctyl phthalate 59, and Pb deriv. of III 0.1 part was calendered at 145-50.degree. to a 0.5-mm. film. This film absorbed light completely at 280-370 m.mu.. By heating the film at 170.degree., it showed less **yellowing** than a control compn. free of III deriv.

ST paints stabilizers; triazines hydroxyphenyl; perfumes stabilizers; soaps stabilizers; gelatin photog stabilizers; coatings stabilizers; hydroxyphenyltriazines; alkanesultones vs triazines

IT s-Triazine, hydroxyphenyl derivs.

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 17362-21-9P 18499-06-4P 18499-07-5P 18499-08-6P
18499-09-7P 18499-10-0P 18499-11-1P 18499-12-2P 18499-13-3P
18499-14-4P 18499-15-5P 18499-16-6P 18499-17-7P
18503-28-1P 18503-29-2P 18503-30-5P
18503-31-6P 18503-32-7P 18503-33-8P
18522-26-4P 20430-29-9P

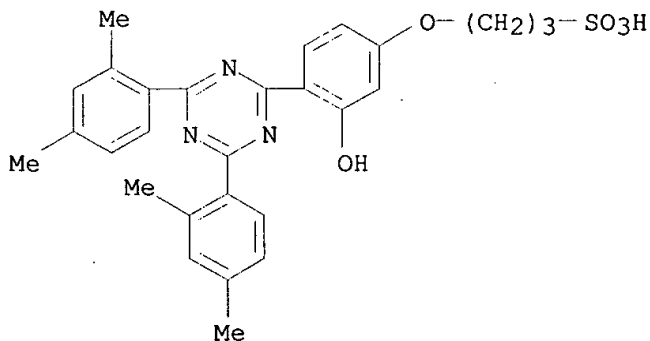
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 17362-21-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 17362-21-9 HCAPLUS

CN 1-Propanesulfonic acid, 3-[4-(4,6-di-2,4-xylyl-s-triazin-2-yl)-3-hydroxyphenoxy]-, monopotassium salt (8CI) (CA INDEX NAME)



● K

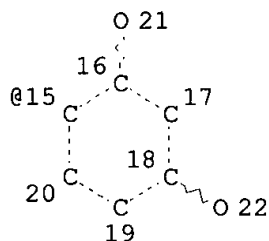
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L5 SCR 1840

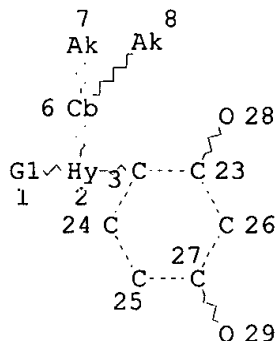
L7 SCR 1993

L9

STR



Ak^Cb^Ak
12 @13 14



VAR G1=15/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY UNS AT 2

GGCAT IS MCY UNS AT 13

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2 N AT 2

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L12 426 SEA FILE=REGISTRY SSS FUL L9 AND L5 AND L7

L13 210 SEA FILE=HCAPLUS ABB=ON L12

L14 66 SEA FILE=HCAPLUS ABB=ON L13(L) (PREP OR SPN OR IMF)/RL

L15 9 SEA FILE=HCAPLUS ABB=ON L14 AND ?YELLOW?

L16 42 SEA FILE=HCAPLUS ABB=ON L14 AND (LIGHT? OR UV OR ULTRAVIOLET
OR ULTRA(W)VIOLET) (3A) ABSORB?

L17 43 SEA FILE=HCAPLUS ABB=ON L15 OR L16

L34 7 SEA FILE=HCAPLUS ABB=ON L14 AND DISCOLOR?

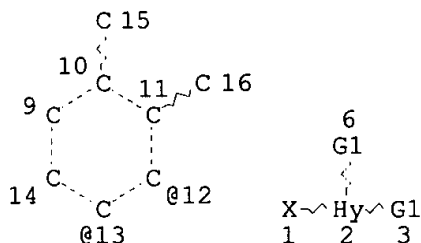
L35 0 SEA FILE=HCAPLUS ABB=ON (L17 OR L34) NOT L17

*no additional
answers*

=> D QUE L33

L24 SCR 1839 AND 1993

L26 STR



covers claim 71

1 structure



1 CA ref = applicants

VAR G1=12/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY UNS AT 2

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2 N AT 2

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L29 SCR 1379 OR 1197

L31 1 SEA FILE=REGISTRY SSS FUL L26 AND L24 AND L29

L33 1 SEA FILE=HCAPLUS ABB=ON L31

=> D L33 ALL HITSTR

L33 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:353442 HCAPLUS

DN 136:370503

TI Non-yellowing ortho-dialkyl aryl-substituted triazine ultraviolet light absorbers and their preparation

IN Gupta, Ram B.; Singh, Hargurpreet; Cappadona, Russell C.; Paterna, Mark; Wagner, Al

PA Cytec Technology Corp., USA

SO PCT Int. Appl., 137 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D251-24

ICS C08K005-3492

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 28

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002036579	A1	20020510	WO 2001-US32209	20011016
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

	AU 2002011759	A5	20020515	AU 2002-11759	20011016
PRAI	US 2000-698368	A	20001030		
	WO 2001-US32209	W	20011016		
OS	MARPAT 136:370503				
AB	<p>Pyrimidine and triazine UV light absorbers contg. a phenolic arom. groups(s) and a nonphenolic arom. groups(s) protect materials (plastics, cosmetics, fibers, etc.) against degrdn. by environmental forces, inclusive of UV light, actinic radiation, oxidn., moisture, atm. pollutants, and combinations. The new class of pyrimidines and triazines includes 2(1) nonphenolic arom. groups with hydrocarbyl groups that are ortho to each other and 1(2) resorcinol or substituted resorcinol groups attached to a triazine or pyrimidine ring. The pyrimidines and triazines may be included in a polymeric structure. Lexan 100 contg. 0.35% 2-[2-hydroxy-4-octyloxyphenyl]-4,6-(3,4-dimethylphenyl)-1,3,5-triazine and 0.1% phosphite antioxidant (Ultranox 641) had a melt flow index 6.8 g/10 min, vs. 8 g/10 min for a control polycarbonate sample without stabilizer, after oven aging at 130.degree..</p>				
ST	pyrimidine dialkylaryl resorcinol light stabilizer polymer; triazine dialkylaryl resorcinol light stabilizer polymer				
IT	<p>Discoloration prevention agents (antiyellowing; non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)</p>				
IT	<p>UV stabilizers (non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)</p>				
IT	<p>Cosmetics Dyes Paper Photographic films (non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)</p>				
IT	<p>Alkyd resins Aminoplasts Epoxy resins, uses Natural rubber, uses Phenolic resins, uses Polyamides, uses Polycarbonates, uses Polyesters, uses Polyethers, uses Polyimides, uses Polyketones Polyolefins Polyoxymethylenes, uses Polyoxyphenylenes Polysiloxanes, uses Polysulfones, uses Polythiophenylenes Polyurethanes, uses Synthetic rubber, uses RL: POF (Polymer in formulation); USES (Uses) (non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)</p>				
IT	<p>Polyimides, uses RL: POF (Polymer in formulation); USES (Uses) (polyamide-; non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)</p>				
IT	<p>Polyimides, uses Polysulfones, uses RL: POF (Polymer in formulation); USES (Uses)</p>				

(polyether-; non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)

IT Polyamides, uses
Polyethers, uses
RL: POF (Polymer in formulation); USES (Uses)
(polyimide-; non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)

IT Polyethers, uses
RL: POF (Polymer in formulation); USES (Uses)
(polysulfone-; non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)

IT 423177-98-4P 423177-99-5P 423178-00-1P 423178-01-2P 423178-02-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)

IT 423177-96-2P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)

IT 260981-92-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)

IT 95-47-6, o-Xylene, reactions 98-09-9, Benzenesulfonyl chloride 98-88-4, Benzoyl chloride 105-39-5, Ethyl chloroacetate 108-46-3, Resorcinol, reactions 108-77-0, Cyanuric chloride 23500-79-0 25267-27-0, Iodobutane 25267-31-6, Iodoctane **423177-97-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)

IT 9002-86-2, Polyvinylchloride 9003-08-1, Melamine/formaldehyde resin 9003-17-2, Polybutadiene 9003-35-4, Phenol/formaldehyde copolymer 9003-53-6, Polystyrene 9003-54-7, Styrene acrylonitrile copolymer 9003-56-9, ABS 9004-36-8, Cellulose acetate butyrate 9011-05-6, Urea/formaldehyde copolymer 24936-68-3, Lexan 100, uses 25014-41-9, Polyacrylonitrile 25037-45-0
RL: POF (Polymer in formulation); USES (Uses)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers and other materials)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Cytec Tech Corp; WO 0014077 A 2000 HCAPLUS

IT **423177-97-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(non-yellowing ortho-dialkyl aryl-substituted triazine UV light absorbers for incorporating into polymers)

RN 423177-97-3 HCAPLUS

CN 1,3,5-Triazine, 2-chloro-4,6-bis(3,4-dimethylphenyl)- (9CI) (CA INDEX NAME)

